CENTER FOR MILITARY HEALTH POLICY RESEARCH

Implementing the Post-Deployment Health Practice Guideline

Lessons from the Field Demonstration

Donna O. Farley

Georges Vernez

Suzanne Pieklik

Sherilyn Curry

ARROYO CENTER CENTER FOR MILITARY HEALTH POLICY RESEARCH

Implementing the Post-Deployment Health Practice Guideline

Lessons from the Field Demonstration

Donna O. Farley

Georges Vernez

Suzanne Pieklik

Sherilyn Curry

Prepared for the United States Army
Approved for public release; distribution unlimited

DOCUMENTED BRIEFING

The research described in this report was sponsored by the United States Army under Contract No. DASW01-01-C-0003.

ISBN: 0-8330-3165-1

Published 2002 by RAND
1700 Main Street, P.O. Box 2138, Santa Monica, CA 90407-2138
1200 South Hayes Street, Arlington, VA 22202-5050
201 North Craig Street, Suite 202, Pittsburgh, PA 15213
RAND URL: http://www.rand.org/
To order RAND documents or to obtain additional information, contact Distribution Services: Telephone: (310) 451-7002; Fax: (310) 451-6915; Email: order@rand.org

PREFACE

The Office of the Secretary of Defense/Office of Health Affairs (OSD/HA) is working with the Deployment Health Clinical Center, the Army Quality Management Directorate, and the Army Center for Health Promotion and Preventive Medicine in the implementation of the Department of Defense (DoD)/Department of Veterans Affairs Veterans Health Administration (VA) practice guideline for primary care management and evaluation of patients with post-deployment health (PDH) concerns. This guideline was implemented throughout the Military Health System beginning in January 2002. Under a contract with the Army Medical Department, RAND contributed to preparation for this initiative by (1) providing technical support to the leadership team, (2) guiding design of a demonstration in which the practice guideline and implementation approaches were field-tested, and (3) performing an evaluation of the demonstration. The evaluation was designed to provide information from the field to help DoD establish policy and practices for effective use of the PDH guideline across the Military Health System.

Work on this project began in December 2000 under the policy direction of OSD/HA and its collaborating agencies. A tool kit of materials to support use of the guideline was prepared and key metrics were selected for monitoring implementation progress. Three military treatment facilities (MTFs) agreed to participate in the six-month demonstration, which began in March 2001 with a two-day conference at which the MTF teams prepared implementation action plans.

This documented briefing presents the results of the RAND evaluation of the field demonstration for implementation of the PDH practice guideline. The primary audience for the document is the leadership of the Military Health System, but the findings also should be of interest to policymakers and practitioners interested in effective use of practice guidelines to achieve clinical practice improvements.

This research was sponsored by the U.S. Army Surgeon General. It was conducted in the Manpower and Training Program of the RAND Arroyo Center and the Center for Military Health Policy Research. The Arroyo Center is a federally funded research and development center sponsored by the U.S. Army.

For more information on RAND Arroyo Center, contact the Director of Operations (telephone 310-393-0411, extension 6500; FAX 310-451-6952; e-mail donnab@rand.org), or visit the Arroyo Center's Web site at *http://www.rand.org/ard/*.

CONTENTS

SUMMARY

The Clinical Practice Guideline for Post-Deployment Health (PDH) Evaluation and Management was established jointly by the Department of Veterans Affairs (VA) and the Office of the Secretary of Defense/Office of Health Affairs (OSD/HA) (DoD and VA, 2000). The guideline was developed in response to concerns by the U.S. Congress about inadequacies in military health care for Gulf War veterans as well as Institute of Medicine recommendations that post-deployment health care should be based on evidence-based practice guidelines and delivered by primary care providers (IOM, 1997; IOM, 1998). The objectives of the PDH guideline are to strengthen the capacity to provide effective military health care for patients with PDH concerns and to place responsibility for this care in the hands of primary care providers. The guideline has three basic components:

- Screening of all patients during outpatient clinic visits to identify whether their health concerns for those visits are deployment-related.
- Classification of each identified PDH patient into one of three categories based on the deployment-related concern: asymptomatic with a health concern, having an identifiable diagnosis (e.g., poison ivy rash), or having medically unexplained physical symptoms (MUPS).
- Management of the patient according to the type of problem identified.

OSD/HA and the DoD Deployment Health Clinical Center (DHCC) implemented the PDH practice guideline across the Department of Defense (DoD) health system beginning in January 2002. Technical and administrative support was provided by the Army Quality Management Directorate (in Army MEDCOM) and the Army Center for Health Promotion and Preventive Medicine (CHPPM).

Beginning in March 2001, the guideline and its supporting elements were field-tested at three demonstration sites: McGuire Air Force Base (AFB), N.J.; Camp Lejeune, N.C.; and Fort Bragg, N.C. The purpose of the demonstration was to test and refine the PDH guideline, its supporting tool kit, and policies and methods for implementation activities by both

local MTFs and the system. These three sites were selected so the guideline could be tested in three of the armed services and also because these installations have high-tempo military deployments.

RAND performed two sets of site visits during the demonstration to learn from the sites' experiences with the implementation process and to obtain their feedback on the PDH guideline itself and on the tool kit of materials developed to support its use. We conducted the first visits in June 2001 and the second visits in September 2001, and representatives from the sponsoring entities also participated to observe the sites' experiences and viewpoints. This documented briefing reports on the findings of the evaluation.

IMPLEMENTATION ACTIONS AND EFFECTS

The demonstration sites established similar administrative processes for implementing the PDH guideline, which focused on the first two guideline components of identifying and classifying patients with PDH concerns. All three sites introduced use of a screening question to ask all patients if the reason for their clinic visit was deployment-related. Few patients were identified as having PDH concerns, although these numbers would be expected to increase following large sustained deployments. Specific findings include the following:

- Fewer than 1 to 2 percent of all patients with visits at each site reported having a PDH concern in response to the screening question.
- Nearly all PDH patients identified had readily definable diagnoses (e.g., poison ivy, sprained ankle, depression). Only a few patients were coded as having MUPS.
- Patients generally responded positively to being asked if their health problem or concern was deployment-related, but many were curious why they were being asked and some wanted to know how the information would be used.
- The sites reported that asking the screening question had little effect on staff workload. For most, it had become just one of the several "vital signs" they had to check.
- Providers reported making no change in their clinical practices as a result of the PDH guideline. Several indicated they had

experience dealing with MUPS cases and that the guideline was consistent with their practices.

- Primary care providers often did not notice the positive responses on the charts for patients identified with a PDH concern. Thus, the providers neither discussed the concerns with the patients nor assigned the PDH diagnosis codes for their visits.

The sites were generally successful in identifying PDH patients with the screening question, and providers were able to classify these patients readily by type of concern (when they noticed them). Because so few PDH patients were identified, the sites could not fully test procedures for managing care for these patients. Thus, little could be learned from the demonstration about methods and issues involved with the third component of the practice guideline. When large-scale deployments occur, clinic staff workload should not increase much, but the number of PDH patients identified will increase, and MTF providers likely will be more aware of them. It will be important for OSD/HA to be ready to provide additional training and support for providers at such times.

LESSONS FROM THE DEMONSTRATION

For local health facilities. To use the PDH guideline effectively, each facility will need to develop a structured plan to incrementally introduce the guideline to all clinics, battalion aid stations (BASs), and troop medical clinics (TMCs). Resources needed to support the process should be provided, and, before starting implementation, all key clinical and administrative procedures and materials should be tested and in place. The goal should be to "institutionalize" new practices and monitoring processes quickly as part of the routine clinic processes. These provisions include the following:

- Proactive and ongoing educational activities to train all staff effectively on the guideline, including both providers and ancillary staff.

- Careful preparation of the clinic staff who will ask the screening question, so they can work effectively with patients and answer patients' questions about the screening and how reporting a PDH concern might affect them.

- Follow-up procedures for patients reporting deployment-related concerns to ensure that providers address the concerns, that

patient visits are coded and documented correctly, and that provisions are made for subsequent care.

For the system. The sites raised a number of items that the OSD/HA leadership team considered in preparing for systemwide use of the PDH guideline.

- The purpose of the PDH guideline needs to be communicated clearly, including specification of the portals and encounters for which it applies.
- In response to feedback from the sites, existing materials in the PDH tool kit were revised and new materials were added; this process of small-scale testing of materials should continue as new tools are introduced.
- A variety of tools should be provided in multiple media for educating providers, clinic staff, and patients on the guideline's purpose and contents.
- Separate information packages should be developed for MTF commanders and division surgeons, each of whom has jurisdiction of some of the local health facilities.
- The wording of the PDH screening question should be standardized to ensure that all facilities use the same criteria to identify PDH patients.
- The section of the PDH guideline on management of patients with MUPS should be clarified, including guidance for provider education and use of forms.
- Facilities should be informed clearly on what they are expected to report to OSD/HA regarding implementation progress and effects on PDH care.
- Facilities should be given instructions on coding of PDH diagnoses in automated systems and on procedures to enter the screening question on automated SF-600 forms.
- Beneficiaries should be educated about the PDH guideline to encourage their participation and to prevent misunderstandings about why they are being asked about PDH concerns.

- The DHCC Web site should be expanded so providers can get specific information on deployments, exposures, and risks for subareas within each deployment location.

SYSTEM ISSUES FOR POLICY ATTENTION

We list here four key system problems identified in the evaluation that require OSD/HA action to support successful use of the PDH guideline:

- The MTFs should be given clear policy and procedural guidance on the definition and coding of "PDH" in relation to patients reporting health concerns related to an anticipated or current deployment. During the demonstrations, the distinction among health problems occurring before, during, or after deployments was found to be an artificial one from the perspective of the patients. As a result of these findings, OSD/HA is considering establishment of a broader Military Occupational Hazard Guideline that would cover management of military-related health problems regardless of when they arise.
- A mechanism should be created to ensure that primary care providers across the system are engaged in PDH care under normal circumstances and are prepared to serve large volumes of PDH patients after major deployments.
- New mechanisms are needed to ensure that contract providers and staff participate in the use of the PDH guideline and related clinic procedures.
- Patient screening data identify only PDH patients who have a concern and come in for care. Current OSD/HA work on a database to track PDH patients from multiple data sources is needed and important.

ACKNOWLEDGMENTS

The commitment and hard work of numerous individuals contributed to the performance of the demonstration to field test implementation of the DoD/VA PDH practice guideline. In particular, we wish to acknowledge the efforts of the guideline champions, facilitators, and action team members at the MTFs participating in the demonstration: the Naval Hospital and a battalion aid station at Camp Lejeune, Womack Army Medical Center at Fort Bragg, and the Walson Air Force Medical Facility at McGuire AFB. The implementation efforts of these teams, as well as their feedback during the process evaluation, allowed RAND's evaluation team to identify areas where the procedures recommended by the guideline worked well, issues requiring additional policy guidance or system modifications, and improvements for the materials in the guideline tool kit.

We also thank the OSD/HA leadership team that guided this project and were active partners in both the development and evaluation work on the PDH demonstration. This team was a partnership led by OSD/HA with the participation of the Deployment Health Clinical Center, the Army Quality Management Directorate, and the Army Center for Health Promotion and Preventive Medicine. The model the team used for implementing this DoD guideline was the practice guideline implementation system developed collaboratively by the Army MEDCOM Quality Management Directorate and RAND. The active engagement by these individuals led to constructive interactions with the demonstration sites and rapid formulation of responses to issues identified, which were pursued in anticipation of systemwide initiation of the PDH guideline in January 2002.

The quality of this documented briefing was enhanced by the thoughtful comments provided by our RAND colleagues, Michael Polich and Lee Hilborne. They helped to strengthen both policy and technical aspects of the presentation of our evaluation findings.

ABBREVIATIONS

ADS	Ambulatory Data System
AFB	Air Force base
BAS	Battalion aid station
CCEP	Comprehensive Clinical Evaluation Program
CHCS	Composite Health Care System
CHPPM	Center for Health Promotion and Preventive Medicine
DHCC	Deployment Health Clinical Center
DoD	Department of Defense
MEDCOM	(U.S. Army) Medical Command
MUPS	Medically unexplained physical symptoms
MTF	Medical treatment facility
NCOIC	Noncommissioned officer in charge
OSD/HA	Office of the Secretary of Defense/Health Affairs
PDH	Post-deployment health
PDSA	Plan Do Study Act
POC	Point of contact
QM/UM	Quality management/utilization management
TMC	Troop medical clinic
VA	(Department of) Veterans Affairs

IMPLEMENTING THE DoD/VA POST-DEPLOYMENT HEALTH PRACTICE GUIDELINE

Lessons from the Field Demonstration

The Clinical Practice Guideline for Post-Deployment Health (PDH) Evaluation and Management was established in response to concerns by the U.S. Congress about inadequacies in provision of military health care for Gulf War veterans, as well as Institute of Medicine recommendations that post-deployment health care should be delivered by primary care providers and be based on evidence-based practice guidelines (IOM, 1997; IOM, 1998). The Department of Veterans Affairs (VA) and the Office of the Secretary of Defense/Office of Health Affairs (OSD/HA) jointly developed this guideline (DoD and VA, 2000). In addition, members of the Department of Defense (DoD)/VA guideline panel identified four key metrics to (1) monitor progress in implementing the guideline and (2) assess effects on patient satisfaction, access to care, and support for primary care providers in delivering the care.

THE POST-DEPLOYMENT HEALTH GUIDELINE

The primary objectives of the PDH guideline are to strengthen the capacity to provide effective military health care for patients with PDH concerns and to place the principal responsibility for this care in the hands of primary care providers at military health facilities. PDH patients include not only active-duty personnel but also their family members, who may be exposed to hazards brought home by the active-duty personnel or may face other related stresses. Possible PDH concerns range from a need for information on health risks associated with a deployment (e.g., exposure to toxic chemicals) to clearly definable health problems (e.g., a broken arm) or symptoms of less-definable health problems (e.g., unexplained rash, chronic fatigue) that may be attributable to a deployment.

The PDH practice guideline consists of three basic components:

- Screening of all patients during outpatient clinic visits to identify whether the health concerns that led to a visit are deployment-related. This component reflects the philosophy that shaped the design of the guideline—that the health system needs to be responsive to the perceptions of patients regarding effects of deployments on their health

or that of their family members, which it had not done effectively in the past.

- Classification of the patient into one of three categories based on the deployment-related concern: asymptomatic with a health concern, having an identifiable diagnosis (e.g., poison ivy rash), or having medically unexplained physical symptoms (MUPS). Providers usually can manage the first two categories of patients readily with education or standard treatments for diagnosable health problems, but the indicated treatment for patients with MUPS often is not clear and requires an interactive provider-patient collaboration to manage the patient's symptoms effectively.

- Management of the patient according to the type of problem identified. This guideline component focuses mainly on steps for the provider to take in managing MUPS patients, which include forging a working partnership with the patient, appropriate use of tests to identify diagnosable conditions, and application of therapies and self-care education to mitigate symptoms for which diagnoses cannot be found.

OSD/HA and the Deployment Health Clinical Center (DHCC) implemented the PDH guideline across the DoD health system beginning in January 2002, with technical and administrative support provided by the Army Quality Management Directorate (in Army MEDCOM) and the Army Center for Health Promotion and Preventive Medicine (CHPPM). The PDH guideline replaces the centralized care model of the Comprehensive Clinical Evaluation Program (CCEP, which provided care for Gulf War Illness) with a model in which medical treatment facility (MTF) primary care providers are the front line for treating patients with PDH concerns, with clinical support from the DHCC. The DHCC makes available clinical consultation and referral resources for MTF providers, to help them treat PDH patients according to the practice guideline. All of the armed services are expected to implement the guideline. OSD/HA also seeks to heighten sensitivity to PDH issues, and to collect data on the epidemiology of PDH to better manage prevention and management of health effects of deployments.

Although the OSD/HA leadership team views collection of data on PDH patients as a useful by-product of the PDH practice guideline, it is not the primary purpose of the guideline. OSD/HA has an existing program that collects documentation of health evaluations for all deployed personnel, including referrals for follow-up care when they return home. However, this system loses many personnel who do not seek their follow-up care, and further, it does not capture any post-deployment concerns on the part of family

members. The PDH guideline is intended to enhance delivery of MTF care for both active-duty personnel and family members with health problems or concerns related to previous deployments. Once these patients are identified by the MTFs, it is important to ensure they are not subsequently lost to the system, which requires effective documentation of care in medical charts and proper coding of all PDH visits in the electronic records.

FIELD-TESTING PRIOR TO FULL IMPLEMENTATION

Before embarking on systemwide implementation, the PDH guideline and its supporting elements were field-tested in health facilities at three military installations: Camp Lejeune, N.C.; Fort Bragg, N.C.; and McGuire AFB, N.J. The purpose of this field demonstration was to refine the guideline and its supporting tool kit and to develop information to better guide implementation activities by both local MTFs and the system. These three sites were selected so the guideline could be tested in three of the armed services and also because these installations have a high frequency of military deployments. The leadership at Camp Lejeune decided to conduct the pilot program at both the primary care clinic (which is focused on families and dependents) and the battalion aid station (BAS) (which focuses on active-duty troops). This broadened the scope of the pilot program.

This incremental approach of testing the PDH guideline on a small scale before full implementation was borrowed from the Army Medical Department, which had successfully used it to implement practice guidelines starting in 1998, including guidelines for low back pain, asthma, and diabetes (Cretin et al., 2001; Nicholas et al., 2001). Through these demonstrations, the Army MEDCOM was able to refine both procedures and support materials involved in working with a practice guideline before applying them across all Army MTFs.

Implementation of the PDH guideline at the three demonstration sites began in March 2001 with a planning conference held in San Antonio, Texas. Each demonstration site designated a team to coordinate implementation of the guideline at its respective health facility. At the planning conference, these teams were introduced to the guideline, monitoring metrics, and a tool kit of materials to support new practices specified by the guideline. The tool kit items had been identified and designed at a tool kit development conference in January 2000 with the participation of primary care providers, many of which were from the demonstration sites. Then MEDCOM, CHPPM, and DHCC developed the tools, with the support of OSD/HA, and printed the final materials and assembled the tool kits. The sites were instructed on a basic process they were to apply for managing care for PDH patients:

- The clinic staff (nurse or technician) who takes vital signs at the start of a clinic visit asks each patient a screening question to identify if the reason for that visit is deployment-related.
- For an identified PDH patient, the primary care provider addresses the patient's informational concerns at the first visit and, as appropriate, performs diagnostic tests to identify diagnosable conditions.
- The provider determines if there is a need for a second follow-up visit to refine diagnosis and manage the patient's care.
- The provider researches possible deployment exposures between the first and second visit, using the DHCC Web site and other linked resources on deployment locations, and gives follow-up care in the second visit.

With this information, each MTF team spent the remainder of the conference developing its implementation strategy and preparing an action plan that included a schedule of actions, assignment of responsibility for each action, and metrics to monitor progress. This planning process was guided by the leader of the RAND team. Each MTF team had a facilitator who led its discussions and helped the team reach consensus on decisions. The facilitators were trained in the planning process and worksheets developed by RAND (Nicholas et al., 2001). Each team performed an analysis of gaps between the practices specified in the guideline and current practices at its MTF and then set its own priorities for actions based on the identified gaps.

The tool kit materials consisted of standardized forms, procedural instructions, and educational materials that were developed centrally to achieve consistent practices across the MTFs and also to avoid the inefficiencies of each MTF having to develop such materials individually. The tools initially included the following:

PDH assessment form: This documentation form is a DoD test form (#DD2844) to be used when a patient answers positively to the PDH question. The first part is the patient vital signs, to be filled out by clinic staff. The second part, which is completed by the patient, asks about the patient's health-related symptoms, deployment history, and deployment health concerns. The third part, to be completed by the primary health care provider, provides space to record the patient's history of illness, findings from the physical exam, diagnosis, treatment plan, clinical risk communication, laboratory results, referrals, and follow-up appointments.

Provider reference cards: As a reminder of the PDH guideline contents, these cards contain the three guideline algorithms and list the key guideline elements.

Diagnostic code card: Lists the diagnosis codes to be used to document the status of a PDH patient and provides instructions for use of these codes.

Metrics card: Contains the four PDH guideline metrics established by the guideline expert panel, which are intended for use by the military services and the VA to monitor progress in implementing the PDH guideline.

Screening stamp: This rubber stamp contains lines for patient vital signs and for marking the patient's answer to the PDH screening question (among other items). The stamp is intended to be a temporary tool to stamp this information on the SF-600 form until facilities can revise the automated SF-600 forms.

Patient brochure: This brochure is designed to educate (and reassure) patients that MUPS are not unusual. It also informs patients about what to expect from their primary care providers and gives information on the DHCC.

DoD deployment health card: A pocket card for patients indicating they may be asked about whether their condition stems from a deployment and why. It also contains directions for the health care they can expect. The card has space to write in the patient's primary care manager and his or her phone number.

PDH Web site: The DHCC established this Web site to give providers information about deployment-related illnesses and symptoms as well as about environmental issues and prevailing health-related conditions in regions of the world where U.S. military personnel have been deployed.

The following tools were subsequently added to the tool kit in response to feedback from the pilot sites:

Deployment health concerns information card: Prepared to assist ancillary staff, it contains information on "how to ask the screening question" and "how to respond to patient questions." It also contains a definition of "deployment" and provides examples of concerns or conditions that are deployment-related.

Post-deployment health clinical practice guideline audit tool: Provides a list of items to be retrieved from patient records when doing a peer review or quality-control audit assessing compliance with the PDH guideline.

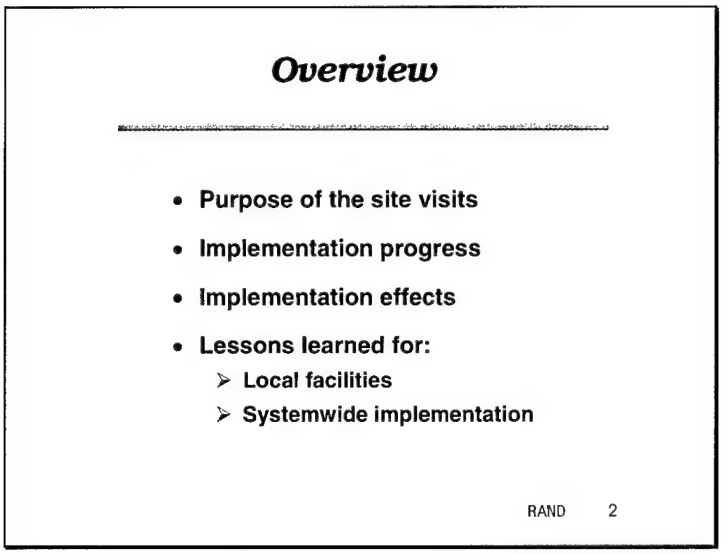
Patient poster: A poster to be displayed in waiting rooms to encourage patients to tell their provider if they "think a deployment has affected their health."

Patient flyer: A flyer to be made available in waiting rooms and containing information about why they may be asked about whether the reason they seek care is related to a deployment and what is a deployment.

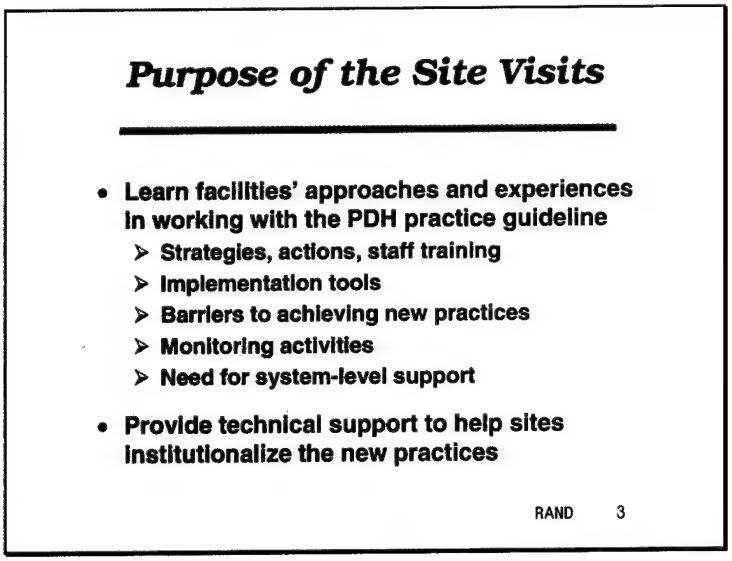
EVALUATING THE FIELD EXPERIENCE

This documented briefing reports on the findings from the evaluation RAND performed to learn from the sites' experiences with the implementation process, and to obtain their responses to the PDH guideline itself and feedback on the tool kit developed to support use of the guideline. In addition to this briefing, RAND provided a preliminary summary of evaluation findings to OSD/HA to facilitate the January 2002 implementation by OSD/HA, MEDCOM, and the DHCC.

Two visits were made to the sites during the course of the demonstration. The first visits were conducted from 14 June through 21 June, after the sites had two to three months to begin their implementation actions. The second visits to Fort Bragg and Camp Lejeune were conducted from 17 September to 20 September. A visit also had been scheduled for McGuire AFB, but it had to be cancelled because the McGuire Flight Medicine Clinic was processing large numbers of personnel being mobilized for the Afghanistan conflict. Instead, information was collected from McGuire in a teleconference held on 24 October 2001. In addition to the RAND evaluation team, representatives from the sponsoring entities participated in the site visits to observe the sites' experiences and obtain firsthand feedback from them.



In this documented briefing, we address four aspects of the process evaluation methods and findings. We first outline the purposes for the demonstration site visits and how the visits were conducted. Then we describe the implementation strategies developed by the sites, how they implemented those strategies, and their progress as of our second visits in September. Third, we present the information gathered on the effects of using the guideline, including effects on providers, ancillary staff, and patients and the frequency with which patients associate their health concerns with deployment. Finally, we discuss the lessons learned from the experiences of demonstration site participants, including lessons that apply to the local facilities and those relevant to systemwide implementation of the guideline in January 2002. Systemwide implications are identified, and recommendations are made to facilitate implementation of the guideline throughout the armed forces beginning in January 2002.



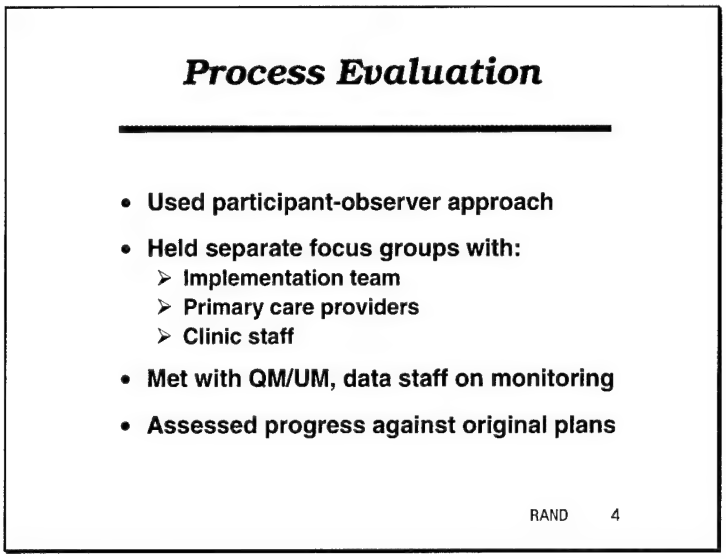
The visits to the demonstration sites served two functions: collection of information for the process evaluation and provision of technical support and information to the sites.

The main evaluation purposes of the two site visits were as follows:

- Assess implementation progress (against original action plans) and learn from the demonstration sites' successes and difficulties as they carried out the strategies in their action plans.
- Assess the usefulness of the tool kit items supporting implementation of the guideline and recommend refinements.
- Assemble information and feedback to help guide planning for implementation across the Military Health System.

We also looked for positive practices or actions that could be transferred to other sites to help implement the guideline effectively as well as for areas where policies and administrative processes might be strengthened to better support local activities. The RAND evaluation team carried out this evaluation function.

With respect to the technical assistance function, guidance was provided to the sites in response to issues or questions they raised or on other specific items identified regarding management of PDH care. This function was carried out by staff from OSD/HA, the DHCC, Army MEDCOM, and CHPPM, with support provided by the RAND team as appropriate.



During the site visits, we used a participant-observer approach to exchange information with the sites and facilitate learning. In addition to the site visits, we reviewed the action plans prepared by the implementation teams during the kickoff conference and we held monthly teleconference meetings with the sites to address their questions and provide guidance.

A diverse group of stakeholders should be considered to fully understand the strategies employed by the sites and the implementation issues they encountered. To account for potential differences in attitudes, motivations, and preferences of the stakeholders, we held separate focus groups with each of the following stakeholder groups at each site: PDH guideline implementation team, primary care providers, and ancillary staff. We also met with quality management/utilization management (QM/UM) and data staff to discuss issues related to monitoring the PDH guideline metrics. The topic areas shown in Table 1 were covered in the focus groups and QM/UM meeting. In particular, the implementation teams were our primary source of information on the sites' implementation progress, including identification of organizational factors, policies, or administrative practices that might have affected their progress.

To ensure uniform coverage of the issues across the three sites, as well as across the three focus groups within each site, protocols were prepared that contained a consistent set of interview questions. During the second site visits, we also asked participants in each focus group to complete short questionnaires. This method was used to ensure we collected consistent information across all stakeholder groups and to learn more about the perspectives of individual participants that

Table 1

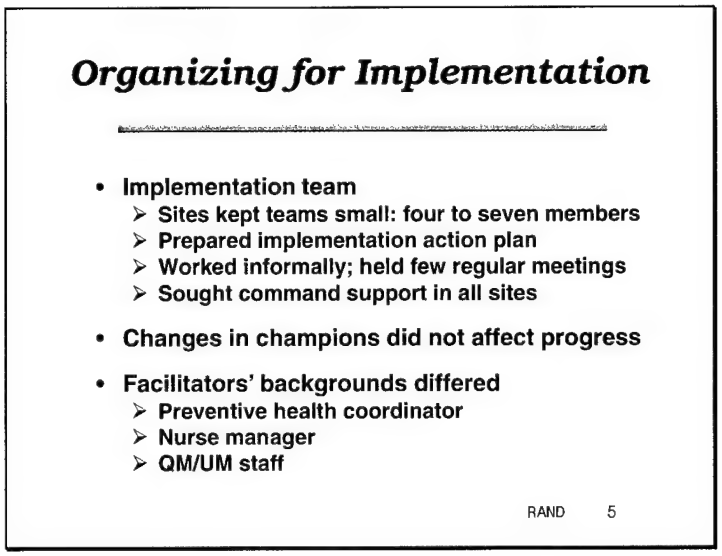
Evaluation Topic Areas Addressed with Each MTF Group

Topics covered during site visits	Implementation Team	Primary Care Providers	Ancillary Staff	QM/UM Staff
Views on guideline and metrics	X	X		
Activities of implementation team	X			
Progress in executing action plan	X			
Implementation successes and issues	X			
Changes in care delivery		X	X	
Feedback on tool kit items	X	X	X	
Provider/patient communication		X	X	
Data collection and monitoring	X			X
Coding PDH patient visits	X		X	X
Feedback on DHCC Web site	X	X		
Issues for broader implementation	X	X	X	X

might be missed in group discussions. Although the sample was too small to have statistically valid data from the questionnaires, the responses offered additional useful insights to supplement information from the focus groups.

To gauge progress made over time, the same topics were covered during both the June and September visits with two exceptions. Detailed review of tool kit items was performed only during the first visits; the review of tools during the second visits focused on getting feedback from sites on the revisions made to tools in response to their earlier suggestions. Issues for systemwide implementation were covered primarily during the second visits, although the sites did identify some issues early, which they raised spontaneously during the first visits. The protocols used for interviews with the MTF implementation teams during each of the two sets of visits are presented in the Appendix. Protocols were similar for interviews with providers and with other clinic staff, but they did not include questions specific to the implementation process.

Participants at the first site visits were asked about the utility and practicality of each tool for the targeted users, and their suggestions were sought for how the tools could be improved. They suggested several changes to the tool kit, including revisions to existing items and addition of some new items (see pp. 42–43).



FORMING THE IMPLEMENTATION TEAMS

The process of implementing the PDH guideline began with the formation of an interdisciplinary implementation team, which was led by a provider "champion" and coordinated by a "facilitator." Other team members were selected to represent groups that would be using the new practices under the guideline. OSD/HA gave the sites guidance and criteria for selection of the champion, facilitator, and team members. As shown in Table 2, all teams included at least one physician and one nurse on their teams, and two of the sites included a clinic noncommissioned officer in charge (NCOIC) and a QM/UM staff. QM/UM staff are important for successful monitoring of the PDH guideline metrics. The other team members varied across sites. One site had an administrative assistant, a petty officer, and a preventive health coordinator on the team; another had a patient representative; and the third site had a physician assistant and a behavioral scientist.

Table 2

Membership of MTF Implementation Teams

	Camp Lejeune		Fort Bragg	McGuire AFB
	Family Practice	BAS	Family Practice	Family Practice
Physicians	2	2	2	1
Nurses	1	1	2	1
QM/UM staff			1	1
Clinic NCOIC		1	1	1
Others	3		1	3
Total	6	4	7	7

All sites changed the composition of their implementation team following the implementation conference. One site added a nurse and a QM/UM person to its team, and another site reduced its members from eight to seven, adding one physician and reducing the number of nurses and ancillary staff. The third site reduced its physician members from three to two and added a preventive health care representative.

DEVELOPING THE ACTION PLANS FOR GUIDELINE IMPLEMENTATION

The sites' implementation teams developed their action plans to implement the guideline at the demonstration kickoff conference in March 2001. With guidance from RAND on the planning process and format to follow (Nicholas et al., 2001), each team developed its action plan independently to take into account the unique practices and environments in their locations.

The three sites specified similar priorities and activities in their action plans, reflecting the instructions they received on the basic process for managing care for PDH patients. They undertook four strategic steps that were generally sequential: introduce and educate providers and ancillary clinic staff on the PDH guideline, initiate universal screening of incoming patients for PDH concerns, triage PDH patients identified and seek to reach a diagnosis, and manage patients according to diagnosis status.

All sites planned to take similar actions to implement these steps, including presentations to educate providers, nurses, ancillary staff, and at one site even coders; changing the preprinted documentation form for a visit (the SF-600 form) to facilitate recording a patient's report that the visit was post-deployment-related; and adjusting relevant forms on which visits are coded to comply with the guideline coding requirements (i.e., the Ambulatory Data System [ADS] forms and the superbills used by some MTFs). One site planned also to designate a case manager who would be responsible for management and

follow-up for PDH patients. The sites' action plans differed primarily in the specificity with which they defined how they planned to implement their proposed actions and the person(s) responsible to carry out each of the proposed actions.

CHAMPIONS AND FACILITATORS

Champions, the leaders of the implementation teams, were physicians at all sites. Their military rank varied from O-3 to O-6. Rank seniority does not appear to have affected implementation progress in this small demonstration where each site was seeking to implement the PDH guideline in only one clinic. Still, the O-3 champion indicated that he sometimes was handicapped in achieving practice changes among physicians who were his peers or seniors. Experience with implementation of other practice guidelines suggests that, for effective implementation across multiple clinics, it may be necessary (although not sufficient) to have a champion of senior rank with the authority to make the necessary changes to clinical processes.

Reflecting the frequent rotation of staff at military treatment facilities, the champions at two of the sites turned over during the early months of implementation. In both cases, the teams were aware of the pending personnel changes, and had included the two new champions on their teams at the implementation conference. Hence, progress on implementing the sites' respective action plans was not affected.

Facilitators also had different backgrounds across sites, which did not appear to affect implementation progress. The facilitator at one site was also the designated facilitator for implementation of all other practice guidelines being implemented at that facility. This centralized role provided expertise and administrative coordination that could enhance both the introduction of new guidelines and the ongoing monitoring of key metrics for each guideline, including the PDH guideline.

The champions and facilitators carried the load of introducing the PDH guideline to staff and putting in place the procedures needed to implement the action plans. They rarely sought assistance from other team members and rarely held formal meetings of all members of the implementation team. It appears that informal one-on-one communications among team members worked most effectively for the sites, allowing them to manage differing schedules and multiple demands on staff time.

Although tasked with the responsibility to oversee the implementation of the PDH guideline, the champions were not provided with the dedicated time

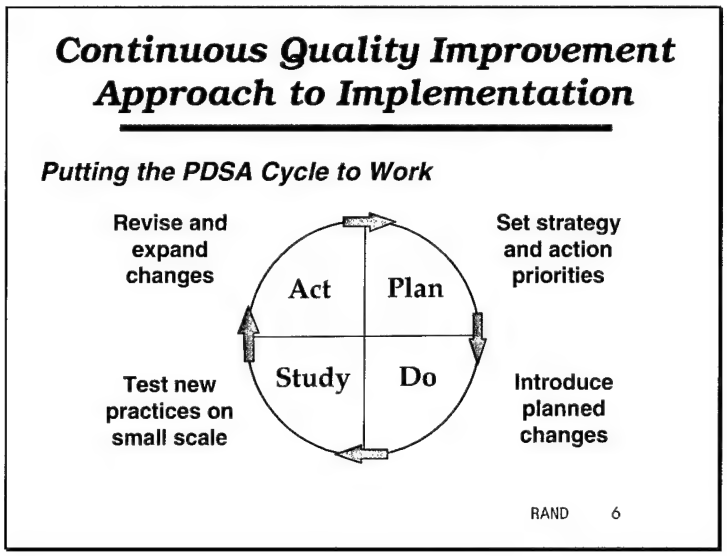
needed for the task. Over the period of implementation, they reported spending 10 to 20 percent of their time on implementation of the guideline while maintaining their regular responsibilities, thus working overtime or sacrificing other work they would have performed. For the champion at the BAS, this was not a major challenge because the BAS was adequately staffed for its patient load. But it was a challenge for the other three champions, all of whom had other clinical and administrative responsibilities and one of whom had the additional task of reorganizing his clinic into a primary care clinic.

SEEKING COMMAND SUPPORT

The champions and their implementation teams recognized the importance of command support for implementation of the guideline, and they secured that support early in the process. They briefed their respective commanders on the PDH guideline and its implications. The association of the guideline with deployments—the core of the military mission—appears to have made this task easier than has typically been the case for other practice guidelines. The sites generally rated command support for implementation of the guideline as good to excellent.

ADVICE FROM THE SITES

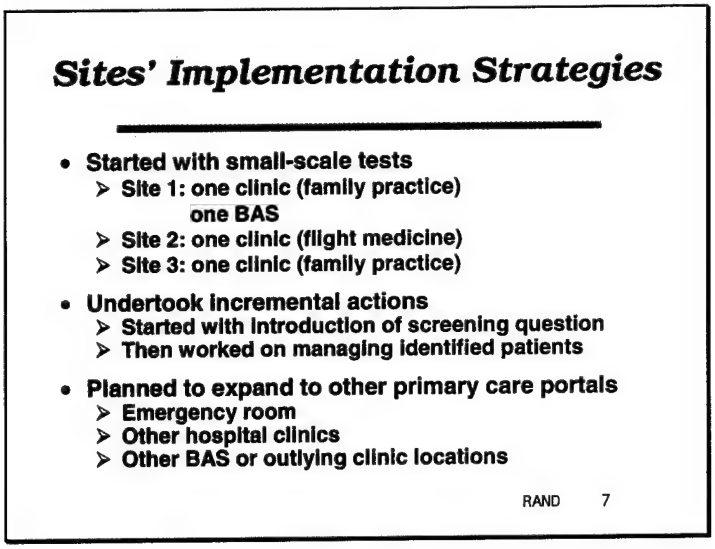
In preparing for implementation of the PDH guideline, the sites stressed the importance of having an interdisciplinary implementation team with representation from physicians, nurses, and ancillary staff. The ancillary staff have the primary responsibility for screening and, if left out of the decisionmaking process or trained or supported poorly, they are likely to be reluctant participants and fail to perform effectively. The sites also stressed the importance of securing command support *and* having all key decisions made before launching implementation activities. This would minimize the number of mixed signals to participating MTFs and staff. Finally, the sites stressed the importance of designating a guideline champion who is a senior officer with command authority to make procedural changes and of allocating dedicated time to this individual.



The Plan Do Study Act (PDSA) cycle, shown in this figure, is a process model for quality improvement that has been used extensively in health care, especially for working with practice guidelines (Langley et al., 1996). At the implementation conference, the demonstration sites were encouraged to use this approach to perform small-scale tests of changes in their clinical processes (e.g., in only one clinic) before applying them on a broader scale (e.g., across multiple clinics).

The "Plan" stage occurred at the off-site implementation conference (see p. 13). During the "Do" stage, the small-scale tests of planned actions are performed, ranging from small (such as a training class) to large (such as redesign of patient flow procedures). During this test, any problems or unexpected events are observed and documented and data are collected to assess the impact of the test. During the "Study" stage, the observations and data are analyzed, comparing what was found to what had been expected to happen and summarizing lessons from the small-scale test. During the "Act" stage, these lessons are applied to improve the action and expand it to the full clinic or group of clinics. It is most important for the implementation team to move quickly through each stage of the cycle to apply what is learned with little delay. This has been referred to as a rapid-cycle continuous quality improvement process (Swinehart and Green, 1995).

During the site visit, we examined the extent to which the PDH demonstration sites used this incremental approach in their actions to introduce new practices for identifying and managing PDH patients.



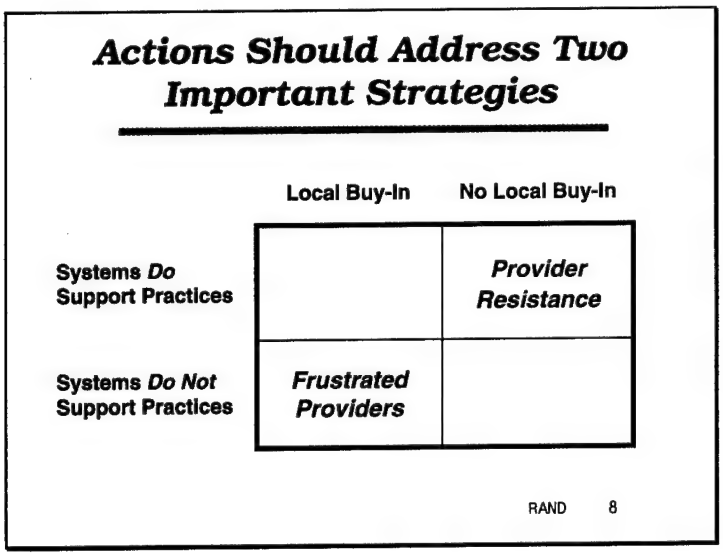
The three demonstration sites implemented the PDH guideline incrementally. Two sites chose to begin implementation at one clinic. The third site (Camp Lejeune) began at one of its hospital clinics as well as one of the numerous BASs on base that serve active-duty personnel exclusively. The leadership at Camp Lejeune chose this approach because practices differ considerably between the hospital clinics and the BAS, and their respective staffs answer to a different chain of command. Thus, a total of four clinics were selected as the settings for initial implementation: two family practice clinics that serve both active-duty personnel and family members and a flight medicine clinic and BAS that serve active-duty personnel exclusively.

All sites focused initially on the first phase of the PDH guideline—identification of patients with deployment-related health concerns. As of our first visits, the sites had introduced new procedures for clinic staff to ask all patients whether their health concerns were deployment-related. Clinic staff asked this question at the start of each clinic visit when they took a patient's vital signs. The patient's answer was recorded as a "yes, no, or maybe" on the SF-600 form, which was placed in the patient record for use by the primary care provider.

The sites had planned to then begin implementing the other elements of the PDH guideline. However, few patients were identified with PDH concerns, and the sites had difficulties engaging providers. The providers tended not to notice the patients with a "yes" or "maybe" answer to the screening question, in part because of the low incidence of patients reporting post-deployment concerns. These issues are discussed in greater detail below.

All sites also were planning to implement the guideline eventually at other portals, including other primary care clinics, BASs, troop medical clinics (TMCs),

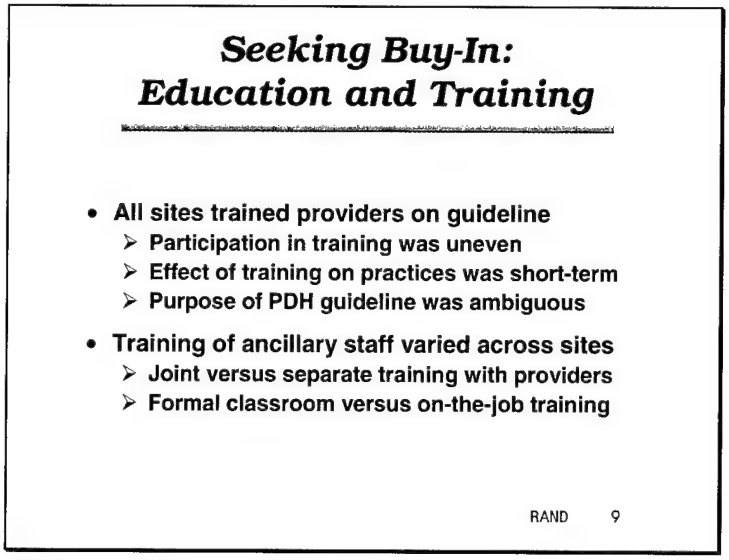
and emergency rooms. Two considerations ultimately led the sites to postpone expansion of their implementation scope to coincide with the systemwide implementation scheduled for January 2002. First, the champions for the demonstration had been drawn from the clinics or BASs participating in the initial implementation, and they did not have the authority or the necessary dedicated time to undertake activities in other clinics. Second, the expansion would have taken place during the summer months at the time of highest turnover of command and staff personnel.



Previous guideline implementation demonstrations performed in the Army Medical Department highlighted two main issues that need to be addressed to ensure successful changes in practices by MTFs and other local facilities: build local ownership or "buy-in" from the staff responsible for implementing the new practices and ensure that clinical and administrative systems are in place to facilitate staff adherence to the guideline.

This figure shows how staff buy-in and system changes interact to produce different implementation results. Having *both* local ownership and system support produces the optimal result, leading to likely implementation success. System support without local ownership produces providers resistant to implementation, despite having clinic procedures and systems equipped to support the process. Provider ownership without system support produces willing providers who are frustrated at their inability to overcome barriers in the MTF systems that hamper their ability to change practices. Finally, with *neither* local ownership nor system support, implementation will fail.

During the site visits for the PDH demonstration, we examined the progress of the local sites on both of these dimensions of change. OSD/HA and the sites sought to achieve buy-in by educating staff on the purpose and the elements of the PDH guideline and by providing materials designed to facilitate its implementation by staff. Aided by these tool kit items, sites sought to implement procedural changes in the processing of patients to achieve universal screening and appropriate follow-up of patients, adjust coding procedures, and put in place monitoring processes to measure compliance and progress.



To encourage understanding of the PDH guideline and buy-in for its use, all the sites began implementation with education activities. Providers and clinic staff were introduced to the guideline and the roles of providers, nurses, and ancillary staff in its implementation. Sites differed in their approaches to training for providers and for clinic staff.

TRAINING FOR PRIMARY CARE PROVIDERS

Primary care providers at the MTF clinics were introduced to the PDH guideline in a one-hour training session that covered the reasons for the guideline, its key elements, and the supporting tool kit materials. In some cases, these introductory sessions were followed up with sessions for providers who could not attend the initial session. The BAS used a different education strategy, responding to the challenge it faced due to continuous turnover of staff. The BAS began with a one-hour training session for providers and all other BAS staff. The session included role playing, which the team thought was important to achieve uniform implementation of the guideline and screening question. The staff who attended the formal training now provide on-the-job training to newcomers so that the process has become routine.

All MTF clinic sites experienced some difficulties reaching all primary care providers, even after scheduling additional training sessions or engaging in one-on-one education by the champion. This issue of incomplete education coverage is universal because of conflicting shift schedules or job demands. Because the demonstration took place during the spring and summer months, this problem was compounded by staff turnover arising from routine relocations of military

personnel and training schedules for medical residents. At our second visits in September 2001, the sites reported that some providers still had not been educated on the guideline, although all were aware of its existence and had informal exposure to related procedures.

The contract providers showed little willingness to participate in educational sessions, and their attendance tended to be low. Some sites made the education mandatory for contract providers and covered their time to attend the sessions. The sites believe that getting contract providers to use the PDH guideline (or any guideline) will remain difficult unless it is mandated and supported in their contracts.

Sites reported that providers tended to overlook patients with PDH concerns because so few PDH patients were being identified. According to providers, when they review the SF-600, they tend to focus on the vital signs they believe are most important (e.g., blood pressure, pain scale). Because they put a lower priority on the PDH screening question, they missed some of the patients who responded "yes" to the question.

The difficulties in reaching all providers and maintaining their attention over time suggest that periodic refresher sessions may be needed to maintain compliance with the PDH guideline. From the system perspective, OSD/HA should be prepared to activate a PDH guideline "refresher" training campaign when major sustained deployments occur and the incidence of PDH concerns is expected to increase.

Primary care providers also raised questions at our first visits about the goals of the PDH guideline, and they did so again at our second visits. This finding suggests that the goals were not yet being communicated clearly or that providers had been suspicious and discounted the goals early in the demonstration. Some viewed the guideline as a mechanism to collect data on PDH concerns, apparently because of the emphasis placed on the patient screening question and coding issues. Many did not understand that the guideline was designed to return the care for PDH patients to primary care providers, replacing the more centralized CCEP care model.

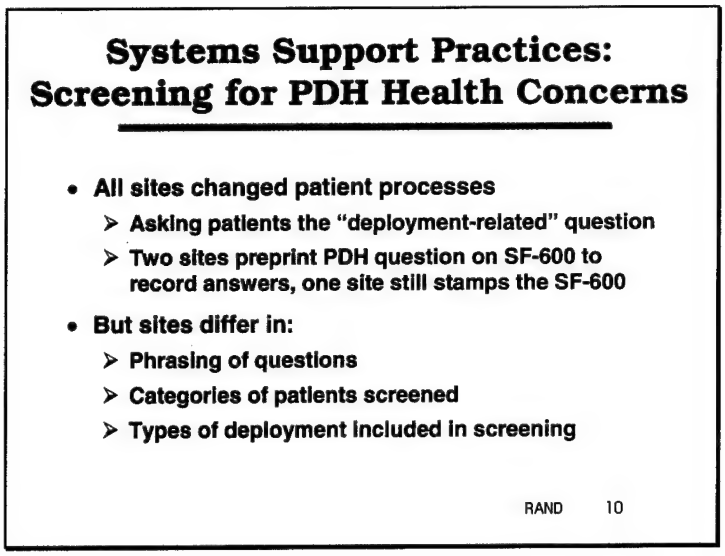
Despite some confusion about its purpose, primary care providers generally were supportive of the PDH guideline, but they saw no difference between the practices recommended by the guideline and what they do with any patients, including MUPS patients and those with clear diagnoses. Few viewed it as increasing primary care providers' capacity to care for PDH patients. Some felt that too much emphasis was placed on care for MUPS patients, given the extremely low incidence of such cases. The main value they perceived was in

expanding knowledge of the epidemiology of PDH concerns that could be useful when caring for large numbers of PDH patients after extensive deployments.

TRAINING FOR ANCILLARY STAFF

The sites differed in how they educated nurses and ancillary staff on the guideline. One site educated ancillary staff in the same formal session given for primary care providers. Another site provided a separate one-hour session for clinic staff that focused mainly on the use of the stamp and trained them how to ask patients the screening question. The leadership at this site thought it was important to make sure that all staff understood the screening process, including the reason for asking patients the screening question and what should be done if the patient's answer were positive. In addition, this site designated a nurse manager to support the front-line staff and address any issues they might encounter while using the new screening procedures. The clinic at the third site provided no formal education, simply instructing the ancillary staff to ask the screening question and record patients' answers on the SF-600 as part of the process for recording their vital signs.

Ancillary staff participating in the focus groups indicated that they were not fully prepared to answer the patients' questions about why the screening question was asked, how their response to the question might affect the patients (or other members of their family), and what qualified as a "deployment." After this issue arose during the first site visits, a new card was added to the tool kit that instructed ancillary staff on how to respond to patients' questions about the screening question. When shown the new card providing the guidance, some staff expressed surprise at how little they knew of the information on the card. They saw a need for further education to acquaint them with the PDH guideline's key elements and to instruct them in how to perform their roles. In particular, they wanted instruction on what to do when a patient answered "yes" to the screening question. Some thought they would benefit from a video that showed role-playing scenarios involving a staff member and a patient, modeling how they should answer a range of patient questions.



As described above, the demonstration sites established similar administrative processes for asking patients the PDH screening question, asking all patients presenting for a clinic visit if their health ailment or concern was deployment-related. One site clinic also maintained a daily record of cases with positive ("yes" and "maybe") responses. Initially, all sites used the rubber stamp provided in the PDH tool kit to manually stamp the screening question in the SF-600 form, where the patient's answer to the question was recorded.

Fairly quickly, two sites reformatted the automated SF-600 forms so the screening question was printed on the SF-600 generated for each patient. This change was made at the same time other new items required by the Joint Commission on Accreditation of Healthcare Organizations were added to the SF-600. One of these two sites made form revisions only for visits with appointments; it was not able to do so for walk-in visits (which were documented using a different form). The remaining site was unsuccessful in efforts to revise its automated SF-600, so it continued to use the rubber stamp to add the question to the SF-600. These experiences reveal the need to provide guidance to local facilities on reprogramming methods for form revisions for the SF-600 and similar forms.

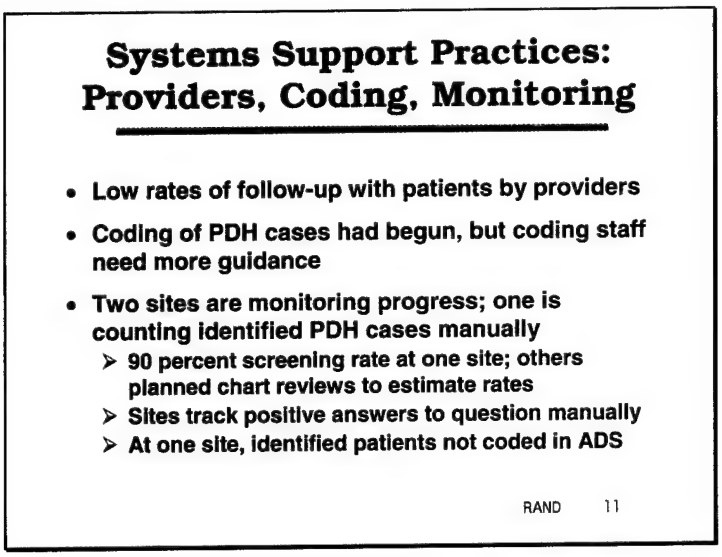
In identifying PDH patients, the sites differed in the way they phrased the screening question, the patients they actually screened, and the timing of concerns relative to deployments. These variations in approach to an apparently straightforward screening process suggest that specific and clear guidance is needed on how to implement this guideline provision.

Phrasing of the screening question: At the start of the demonstration, two sites were asking patients whether the health concern that was the *reason for this visit*

was deployment-related, which was the approach intended by OSD/HA. Initially, one site chose to phrase the question more broadly, asking whether the patient had any health concerns that were deployment-related. When OSD/HA provided clarification that the screening question was intended to address only the current visit, to focus on concerns that led individuals to seek care, this site revised the question accordingly.

Categories of patient visits: Although all the sites initially asked the screening question of all patients seen by the clinics, some sites felt it was inappropriate to screen for deployment-related health concerns for patients coming for routine visits. Such visits included, for example, wellness visits, physical exams, well-baby visit, prenatal visits, and immunization, which were not expected to involve PDH concerns. As a result, the sites varied with respect to which categories of patient visits they screened for PDH concerns. With more experience, however, one site reconsidered its decision to limit the visits for which the question was asked because it found that some visits (e.g., physical exams) might involve underlying concerns that a patient would raise during the visit. The sites also asked whether the screening question should be asked at every visit of a patient.

Timing relative to deployments: Even though the intent of the PDH guideline is to focus on health concerns *following* a deployment, family members have answered the screening question positively for concerns related to both current and anticipated deployments, as well as to previous deployments. The distinction among health problems occurring before, during, or after deployments was found to be an artificial one from the perspective of the patients. Such distinctions reportedly did not affect how care was provided. However, the sites sought guidance on how to code patients identifying concerns associated with current or upcoming deployments.



FOLLOW-UP BY PRIMARY CARE PROVIDERS

At all sites, the process of identifying and managing PDH patients broke down at the point when primary care providers saw patients in the examining rooms. Providers tended not to notice when patients had answered "yes" or "maybe" to the screening question. As noted earlier, the incidence of such cases was so low that providers were not checking routinely for the pertinent item on the SF-600. As one provider stated, "We are getting information overload with the additional items added to the SF-600." At the time of our second visits, the sites were contemplating options to address this problem. For example, one site was testing a procedure to place the SF-600 of PDH patients in a colored jacket to get providers' attention.

Failure to single out PDH cases or to code these cases appropriately does not necessarily mean that PDH patients, and MUPS patients in particular, did not get appropriate care. However, it could lead to negative reactions by patients who had identified post-deployment concerns but did not receive follow-up on the concerns they reported. It also means that data on these cases did not get captured in the MTF's data system. An option that was not tested in the demonstration—but might be effective—would be to engage the patients in the process by having the ancillary clinic staff ask them to take an active role in informing the provider of the PDH concerns they reported (e.g., the patient giving the provider a written note).

CODING OF PDH PATIENTS

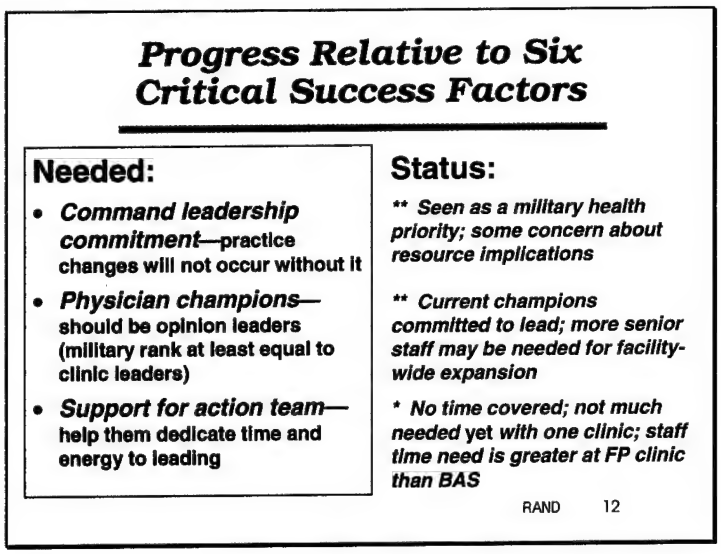
Sites encountered initial difficulties in understanding how to code PDH cases according to the instructions provided by OSD/HA. The coding involves use of two separate codes, one that indicates the case is PDH and another that records the diagnosis. Three types of codes are used for diagnoses: a code indicating an asymptomatic patient with concerns, a code for MUPS, and a standard diagnosis code for diagnosable conditions. The first two types of codes are new, and it took some time for the sites to make the required changes to their forms and systems to include the codes. The sites had completed these changes by the time of our second visit. However, they continued to be uncertain about how to code "maybe" responses to the screening question and sought further guidance from OSD/HA on this issue.

The actual coding of PDH patients was still quite incomplete because providers were not using the codes (related to not noticing that patients had indicated that their visits were deployment-related). For example, at one site, only two out of 24 identified PDH cases had been entered into its ADS. To try to overcome this problem, this site decided during our second visit that clinic staff would circle the PDH code on the superbill at the time a patient answered "yes" to the screening question. This would highlight the PDH status of the case for the providers, and all they would have to do is add the related diagnosis code.

MONITORING

All sites are making progress toward integrating the monitoring of PDH guideline metrics into their regular chart review and other QM monitoring processes. One site had completed its first chart reviews by the time of the June visit. Based on SF-600 forms in the charts, it found that more than 90 percent of its patient visits had been screened and recorded. By the second visit, a second site had performed a similar analysis, finding only 50 percent coverage of the screening question. Using this baseline, the site began actions to increase the percentage of visits for which the screening question was asked. Site personnel thought that a large share of the problem was with walk-in appointments, for which the screening question was not yet added to the automated visit form.

Even as the sites introduced use of uniform coding of PDH visits, they also continued to use manual counts of positive answers to the screening question to evaluate the completeness and accuracy of their coding processes and automated data. The number of patient visits identified as PDH visits continued to be small, not exceeding a dozen patients per month at any one site. For nearly all of these patients, a diagnosis could be identified and treated.



Six factors that are critical to the success of any undertaking to change clinical practices are known from the health care management literature, and the importance of these factors was confirmed in our experience with the Army Medical Department demonstrations that implemented practice guidelines. In this figure and the following one, we summarize our assessment of the status of the PDH demonstration sites on each of these six critical success factors. The number of asterisks shown in the status column summarizes progress made for each factor, where three asterisks indicated the condition was fully met at the time of our visits and two or one asterisks indicate the condition was only partially met.

High command leadership commitment: Commanders at all sites were supportive of implementing the PDH guideline. They generally saw it as a military health priority and a way to communicate concern about the well-being of their troops and their family members. At one site, however, the commander raised concerns about effects on workload (so far minimal) and about being accountable for yet one more initiative. Changes in MTF command teams during the early implementation period did not appear to affect the level of local command support.

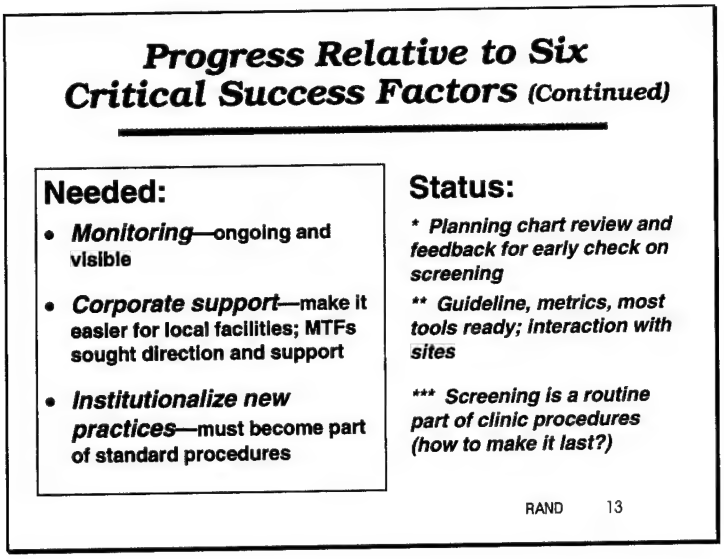
Physician champions of rank equal to clinic leaders: To be effective in implementing any clinical practice guideline, the local champion must be able to command the attention and time commitment of primary care providers. He or she also should have the authority to guide changes in clinical and administrative procedures, an authority that typically is vested in senior staff of rank equivalent to that of clinic leaders. This being said, rank is rarely an

effective substitute for commitment and leadership skills on the part of a guideline champion.

The champions at two of the sites were senior officers, while the champion at the third site was a junior officer. This junior officer was given strong command support, however, which provided him the authority needed to proceed effectively in implementing the guideline in his clinic. Turnover of the champions at two of the sites did not appear to affect implementation progress because both sites had anticipated and provided for an overlapping leadership transition, thereby assuring continuity in key decisions and activities by the team during the leadership transitions.

Dedicated time for implementation team members: For successful implementation of new clinical practices, the guideline champion, facilitator, and members of the implementation team need to have dedicated time available to them commensurate with the magnitude of their respective tasks. Little dedicated time may be needed to work with a guideline that is simple and requires few changes in clinical procedures, but the time necessary increases with the complexity of the guideline. The amount of time needed is also dependent on the size of the facility and the number of staff affected by the new practices. In the absence of dedicated time, other priorities and routine job requirements are likely to interfere with implementation activities, thus slowing the momentum of the implementation process and reducing the ability to institutionalize the new practices.

For this demonstration, none of the sites provided specific dedicated time to members of their implementation teams with the exception of the time provided to attend the kickoff conference. The champions reported that dedicated time was not a major issue, in part because each team had been applying the guideline in only one clinic. Time demands are likely to become more important when the teams begin to introduce the new PDH practices across all clinics and other facilities at their sites.



Ongoing and visible monitoring: Achievement of effective monitoring requires use of consistent coding of health care encounters followed by regular and consistent measurement of the guideline metrics and other monitoring indicators. With the exception of the BAS, which does not have automated systems, the sites made the necessary changes to the coding sheets and trained the ADS and Composite Health Care System (CHCS) data entry staff in the proper use of the codes. However, the sites continued to struggle with getting providers to notice PDH patients during clinic visits and code consistently for the PDH visits. Seeking to resolve these problems, one site was experimenting with color-coded folders for PDH cases, and another instructed its clinic staff to mark the PDH code on the superbill for patients answering "yes" to the screening question.

To assess compliance with asking the screening question, two sites performed chart reviews, with one site finding a high (90 percent) level of compliance and another a lower, but still encouraging (50 percent), level of compliance. As they developed their automated data coding and reporting, sites also kept a manual count of the PDH cases identified in their respective clinics.

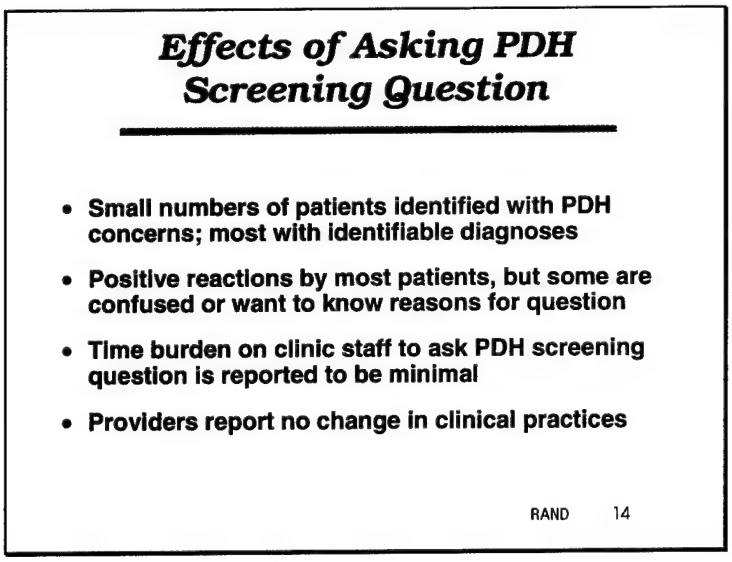
Responsive corporate support and leadership: OSD/HA, the DHCC, Army MEDCOM, and CHPPM collaborated in developing the overall policy and guidance for implementation of the PDH practice guideline by the demonstration sites, and they continued to work with the sites throughout the demonstration as policy or clinical questions arose. The DHCC conducted on-site educational sessions for providers on techniques and issues involved with providing care for PDH patients, with a focus on managing patients with unexplained symptoms. Working with providers from the military services and

VA, the DoD leadership team identified a set of tool kit items designed to support and facilitate the implementation of the PDH guideline. These tools then were developed by MEDCOM and CHPPM and made available to the sites for their use and testing. They were eventually revised based on the sites' comments and suggestions after our first visits as discussed earlier and other items were added per the sites' recommendations.

When asked to rate the responsiveness of the OSD/HA to their questions and recommendations, site staff rated it from very good to excellent.

New practices institutionalized: The goal of actions to implement a guideline is to replace undesired existing practices with new practices recommended by the guideline. These practices may include clinical, educational, or administrative processes involved in delivering care to patients with the concern or condition addressed by the guideline. To achieve successful implementation, new practices need to be successfully integrated into a clinic's normal (routine) procedures within a finite period (typically six months or less), such that all clinic staff view them as "the way we do business here."

As of our second site visits, all sites had institutionalized use of the screening question with a high level of compliance. However, they had not yet achieved consistent follow-up and management of identified PDH cases by providers. Appropriate and consistent coding of PDH cases did not always take place, as noted above. Monitoring and compliance assessments were being used but had not yet become a routine part of their peer review or quality-control processes, although all sites were planning to make them routine.



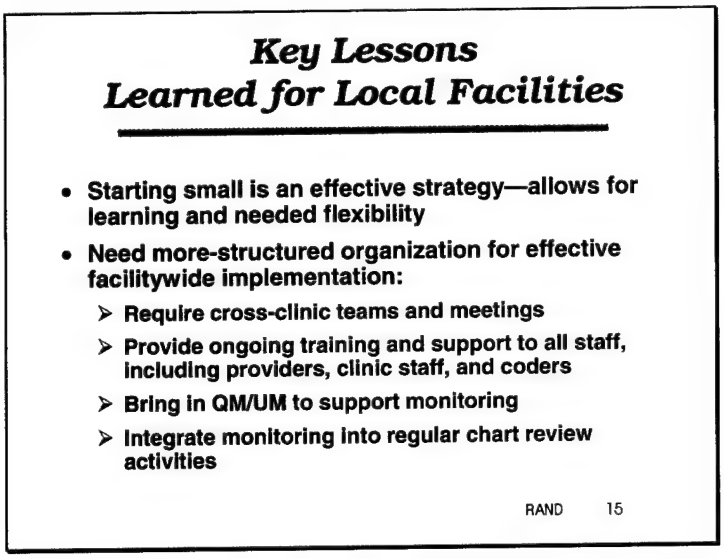
Preceding the demonstration, concerns were expressed that the PDH guideline might identify a large number of PDH patients and lead to significant increases in workload for clinics and primary care providers. Hence, the minimal effect of the guideline on clinics and the BAS ancillary staff and providers came as a surprise to many. After screening nearly all patients with visits at the demonstration clinics and BAS during the six-month demonstration, sites found that fewer than 1 to 2 percent of patients seen by the clinic at each site reported having a PDH concern. (These rates reflect activity levels at a clinic, which are what drive providers' workload and attention.) An alternative population-based measure would be to calculate PDH incidence rates as a percentage of total deployed personnel and their family members, but the MTFs do not have the data to estimate the denominator for this rate. These low incidence rates are significant because they occur at military installations with some of the highest volumes of deployments in both the continental United States and overseas. Nearly all patients reporting a PDH concern had readily identifiable diagnoses, ranging from poison ivy to sprained ankle to depression. Only a few patients were coded with MUPS.

It is not likely that this low incidence of deployment-related health concerns would prevail after a large, sustained deployment involving a conflict situation. It may be expected that the need for substantial PDH care by primary care providers will arise on an episodic basis following major deployments, such as the Gulf War or the current war on terrorism. Such a pattern of PDH care will require planning for expected peaks in activity, including refresher training for providers and other staff, which should be carefully monitored over time.

Patients generally have responded positively to being asked whether their health problem or concern is deployment-related, but they were curious why they were being asked the question and how the information would be used. Some were suspicious and anxious about whether a positive response could be damaging for them, as illustrated by patients who asked, "Will it cause problems for my husband's career?" and "Is it going back to my commander?"

The sites reported that asking the screening question had little effect on staff workload. For most, it has become just one of the several "vital signs" they have to check. This result has alleviated some initial (and understandable) concerns that implementation of the PDH guideline would increase an already heavy work demand in the clinics.

Providers reported making no change in their clinical practices as a result of the PDH guideline. Several indicated they had experience dealing with MUPS cases and that the guideline was consistent with their practices. They did express some concerns, however, that with the higher visibility given to PDH patients, they might find themselves "caught between advocating for patients and protecting the military." They understood that military providers had this dual role and that in that capacity they had to balance these two interests.

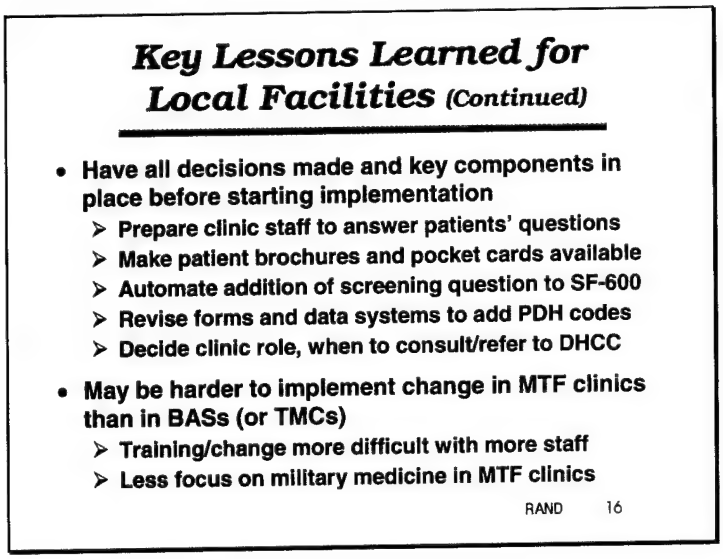


For the remainder of this briefing, we turn to the many lessons learned from the demonstration. These include lessons for local health facilities to increase effective identification and management of patients with PDH concerns, as well as lessons for OSD/HA to help prepare for introducing the PDH practice guideline across the entire Military Health System in January 2002.

This demonstration, like others before it, has shown that an effective implementation strategy for the local facilities is to start small and introduce new practices first at one or two clinics, or one clinic and a BAS/TMC, before expanding to a larger number of portals. This approach allows the local implementation team to gain experience, test approaches, and modify those that are not working or meeting local resistance. Furthermore, experience gained in one or two clinics can help address staff concerns about increased workload or other issues and, hence, can ease subsequent implementation in the remaining clinics and BASs/TMCs.

To implement the PDH guideline, it will be important for each local facility to have a structured plan to extend use of the guideline incrementally to all clinics and BASs/TMCs, including provision of resources needed to support the process. To be most effective, the implementation team ought to include at least one representative from each clinic involved in implementation. All staff involved—providers, ancillary staff, and coders—should be briefed fully about the key aspects of the guideline and their respective roles and responsibilities in the implementation. Ongoing training activities will be required to train all staff effectively. For ancillary staff, it is particularly important that a supervisor be designated as a resource person for the staff and be prepared to answer questions that staff may have about dealing with patients and follow-up by the

providers. The goal should be to "institutionalize" the new practices and monitoring processes—that is, to integrate them into the routine clinic processes as a normal part of daily operations.

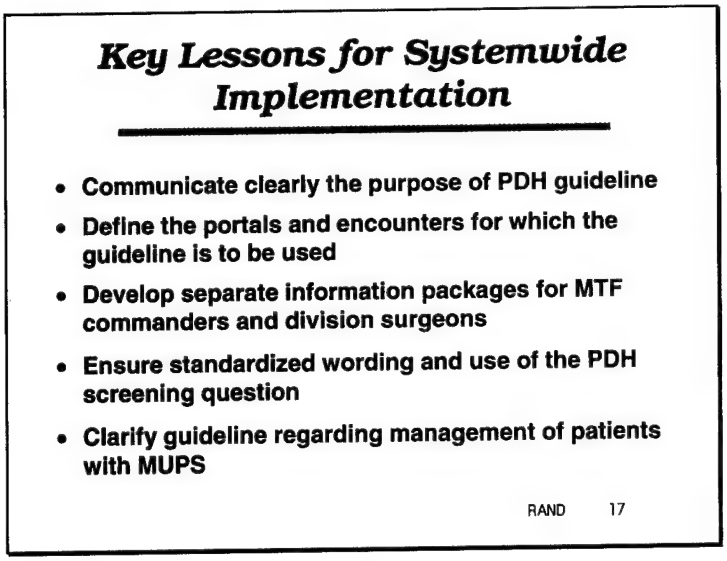


Another lesson for local facilities is to have all key clinical and procedural decisions and all materials available before implementation starts. Facilities should make all necessary changes to the SF-600, superbills, ADS encounter sheet, automated entry into KG-ADS (automated ADS encounter record), and other data systems. Decisions should be made on how to handle follow-up for patients reporting deployment-related concerns. Procedural changes made on an as-you-go basis are confusing to staff, prone to errors, and vulnerable to being implemented inconsistently.

The clinic staff asking the screening question should be prepared carefully and trained to work effectively with patients, and they should be able to answer patients' questions about the reasons for the screening and what will happen if they report a PDH concern. The sites varied in their training activities for clinic staff, and the staff who were better trained and supported tended to be more knowledgeable and confident about asking patients the screening question.

The sites generally did not undertake patient education activities during the demonstration, which would have been useful to reduce patient confusion and questions. More attention should be given to educating patients about the purpose of the PDH guideline and the availability of related services. Written educational material should be distributed to patients about deployment-related health concerns and, as appropriate, about MUPS. Patients also should be informed about the DHCC services and why and how they might be referred to the DHCC. As a result of the site visits, patient brochures and posters explaining why the PDH screening question was being asked and media packages directed at patients were developed by MEDCOM, CHPPM, and the DHCC.

The BAS encountered fewer difficulties in introducing universal screening than the other demonstration site clinics did, apparently because they had fewer staff and lacked automated information systems. It was relatively easy for them to provide training on the PDH guideline for the full staff team and to work together to develop procedures for using the screening question. The Military Health System has a large number of these small units (BAS or TMC), however, and initiating use of the PDH guideline and new practices at all of these facilities could become an administrative challenge. This large implementation undertaking will require the full support of the division surgeons to whom they report.



The following lessons drawn from the demonstration should help strengthen the introduction of the PDH practice guideline across the entire Military Health System, beginning in January 2002. One set of issues involves the need to clarify the intent of the guideline as well as related policies and definitions. Another set concerns the tools provided to support implementation, with an emphasis on achieving effective communication and providing materials in a variety of formats.

Clarify purpose of the PDH guideline: As noted earlier, the sites still were not completely clear about the purpose of the PDH guideline by the end of the six-month demonstration. In addition, some providers were puzzled about whether there was any difference between caring for PDH patients and caring for other patients. For clarity of mission in systemwide use of the guideline, it will be critical to communicate the purpose and goals of the PDH guideline clearly and consistently to the military health facilities and all groups affected by the guideline, including providers, ancillary staff, command and management, and patients.

Define portals and encounters for use of the screening question: Clear directives should be given regarding the portals at which screening for deployment-related health concerns is to be done. Sites felt that in addition to family practice clinics and BASs/TMCs, screening should be done at other clinics defined as primary care clinics, the emergency room, and possibly for hospital inpatient admissions. On the other hand, they suggested that the question not be asked at some types of visits involving preventive health or routine care, such as well-child care and routine pregnancy visit. The sites initially felt the question was not relevant for these visits, although with further experience, one site

concluded that physical exams should not be excluded because PDH concerns may arise during such visits. If this approach is used, a list of the types of visits excluded would need to be prepared and distributed to provide clear guidance to the MTFs, BASs, and TMCs.

Seek support of commanders and division surgeons: Another key lesson is that multiple jurisdictions will be involved in using the PDH guideline across the system, and explanatory materials will need to be provided to all these jurisdictions. This lesson was identified from the experience of the BAS, which reports to a division surgeon rather than to the MTF on the base, and it is especially pertinent to all installations with BASs or TMCs. An information package should be prepared and distributed prior to the start of systemwide implementation that introduces the guideline to division surgeons, discusses the reasons for it, and requests their support for implementing it in the BASs/TMCs under their command.

Ensure uniform screening of patients: It was confirmed by the OSD/HA leadership team that the intent of the PDH guideline is to identify whether the reasons for a particular patient visit are deployment-related. It will be important for all facilities to use a standard question consistently to ensure that they identify only PDH concerns that led patients to seek care and to mitigate confusion for staff and patients. As described above, one site differed from the others in how it phrased the screening question. This site placed the question in the context of *any health concerns related to any deployment either recent or past* while the others asked more narrowly whether the *health concern for this visit was deployment-related.* It was not clear from the early data whether the different phrasing of the question affected the frequency of positive responses, although over time, higher rates of positive responses would be expected for a question addressing any deployment-related concern.

Provide guidance for provider follow-up of PDH patients: Training providers on the PDH practice guideline involves two distinct educational activities. The first is the provision of information about the purpose and contents of the guideline, with specific instructions on the steps involved in identifying and managing patients with deployment-related concerns. The second is training on methods to establish a viable provider-patient relationship when treating PDH patients, especially those with MUPS. The need for extensive training on provider-patient relationships and management of MUPS patients may arise only episodically, following major deployments, and it will be important to have the resources for this training tested and in place for when they are needed.

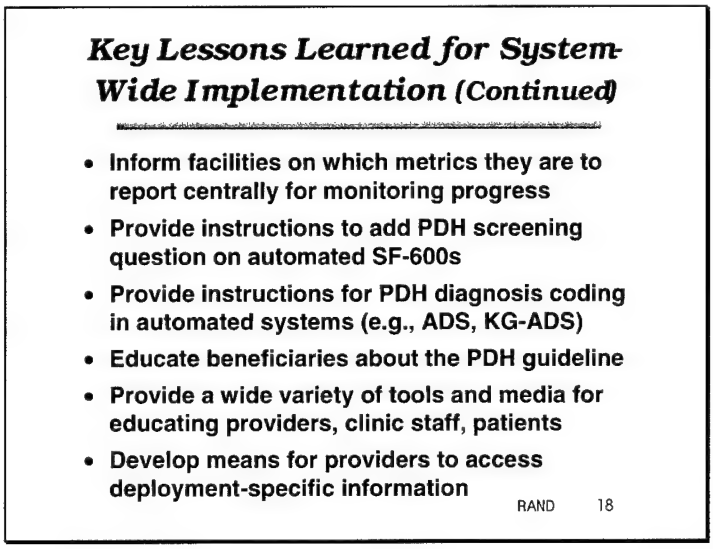
A briefing that introduced primary care providers to the PDH guideline was one of the original tools provided in the tool kit. This briefing focused more on the

history leading up to the guideline and the motivation for using it, however, and it did not present much information about the guideline contents. We observed that many providers at the sites did not know what was in the guideline, and few had even looked at either the algorithms or the card listing the key guideline elements. The site team leaders requested improvement of the training materials to provide better information on the guideline. In response to this feedback, a new briefing was prepared that focused more on the contents of the guideline, which local facilities can use to educate providers on the guideline as they begin implementation activities.

In May 2001, the DHCC conducted on-site educational sessions at each of the demonstration sites on the topic of provider-patient relationships for PDH patients. The primary focus of these sessions was on working with patients with MUPS, where issues of trust and respect become especially important for effective care and patient satisfaction. Each session was three to four hours long and included both didactic content and small group discussions. During the site visits, we asked providers for feedback on the DHCC sessions. In general, participants thought the training information was useful and they learned something from it, but there was consensus that the sessions were too long. It was suggested that the training be formatted into several discrete modules, each of which was short enough to be used easily.

As part of the guideline implementation across the DoD system, risk communication training has been scheduled for September 2002. In addition, the DHCC is developing a modular Web-based interactive risk communication training program.

The PDH assessment form is a documentation form designed to provide an efficient method for providers to document care for PDH patients that is in compliance with the guideline. The demonstration sites were given little direction initially about how to use the form, and they pursued differing strategies. At the same time, they all asked for further guidance on when the form should be used. OSD/HA informed them that use of the assessment form is voluntary. There was some consensus among the sites that the form would be most useful to document care for PDH patients with MUPS, who are likely to be seen for two or more visits.



Monitoring implementation progress: To achieve uniform and appropriate use of the PDH guideline across all facilities in the Military Health Service, it will be important to perform centralized monitoring of the progress of facilities in introducing the desired new practices and of the effects of those changes on health care delivery and patient satisfaction. It is advisable to have the facilities submit a copy of their implementation plans to OSD/HA, which will provide documentation of their planned actions that can be used for monitoring and evaluation. Steps should be taken early to begin data collection on the four metrics developed by the guideline expert panel, as well as other measures that OSD/HA or the DHCC might want to track. Decisions also need to be made regarding which, if any, information or metrics the local facilities will be required to report to OSD/HA. In response to this issue, OSD/HA has turned to the TRICARE Management Activity's National Quality Management Program, which is monitoring the PDH guideline's deployment in FY 2002 and those projected for FY 2003.

Routine reporting of selected process measures also might be useful to stimulate actions and document progress. Examples of measures include the percentage of visits for which the screening question is asked, rates at which patients report PDH concerns, the type of concerns identified, and rates of referrals to the DHCC for further actions. OSD/HA might also want to ask facilities to submit regular reports on implementation progress during the first few months to help stimulate actions, although this benefit should be weighed against administrative burden for the facilities and OSD/HA.

Instruct how to revise automated SF-600: Instructions should be provided to local facilities on how to modify their software for the automated SF-600 forms to

include a PDH screening question on the form. For two of the three sites, implementing this important capability proved to be difficult and required outside assistance. This capability should also be developed for walk-in visits to ensure uniformity of procedures for all types of visits. Detailed instructions have been added to the tool kit in response to feedback from the demonstration sites.

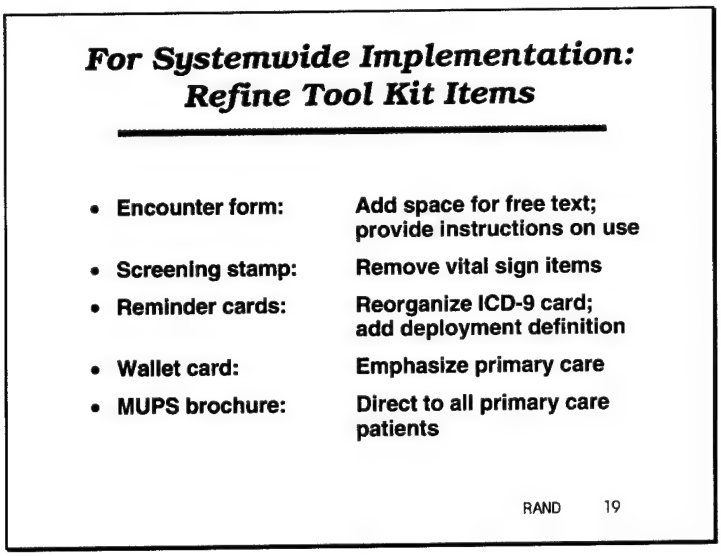
Instruct in use of PDH diagnosis codes: This involves both clarification on how to code patients with PDH concerns and step-by-step instructions on how to use the codes with automated data systems. The coding instructions in the PDH tool kit have been revised in response to feedback from the sites, including examples of coding for several types of patients. Some sites found it difficult to use the codes already available in the KG-ADS system, which could be eased by provision of detailed instructions and technical support. Because of these difficulties during the demonstration, detailed instructions were added to the tool kit.

Inform military personnel and their families: As important as it is to educate all staff on the PDH guideline, it is equally important that military personnel and their family members be informed about the purpose of this initiative, the use of the screening question, and what it means for them. This information should be an integral part of the communications activities during the systemwide implementation of the PDH guideline in January 2002. The demonstration sites suggested a coordinated marketing effort that would use all available media both centrally (e.g., Armed Forces TV channels and newspapers) and locally at individual facilities.

Provide tool kit items in multiple media: All sites said they would like to have a wide variety of staff training, patient education, reminder materials, and related materials in multiple media (e.g., briefings, video, computer-based programs, paper). The local facilities reported they vary widely in which presentation media they had available, and they also felt that staff and patients differ in the media they are most comfortable using. A request that all materials incorporate many examples was a consistent theme regarding design of these materials.

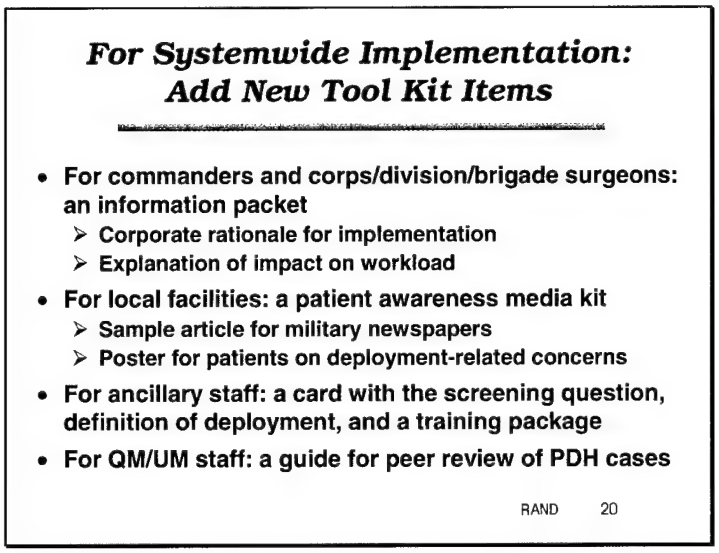
Enhance provider access to deployment information: Primary care providers in general gave very positive feedback about the DHCC PDH Web site and endorsed its purpose of providing easy access to deployment information and health-related issues associated with them. In reviewing the screens with information about exposures and risks for individual deployments, they felt that the information given was too general because microenvironments within a deployment region can differ widely in climate and types of exposures for military personnel. For instance, the climate in Colombia varies from tropical

near the Amazon and the central valleys to cold and foggy high up in the Andes. Primary care providers felt that in this case more specific information would be needed about exactly where the patient had been, for how long, and under what conditions. They also felt that having access to a point of contact (POC) who was actually deployed at the same time would be the most helpful.



OSD/HA and its collaborators (the DHCC, Army MEDCOM, and Army CHPPM) developed a tool kit of materials to support the MTFs as they implemented the PDH guideline. The items in the tool kits were selected by a panel of individuals, including some who participated in developing the practice guideline and others from the field who would use the materials during guideline implementation. These materials were field-tested in the PDH demonstration, and feedback was obtained from the sites on the value of each item, how improvements could be made to items, and what new items might also be useful.

During our first visits, staff at the demonstration sites made a number of suggestions to increase the clarity and effectiveness of the PDH tool kit items, including the key items listed above. OSD/HA revised the tool kit items in accordance with the staff suggestions, and the revised materials were made available to the sites shortly before our second visits. Although staff at the sites did not have an opportunity to work with the revised materials, they generally found the revisions were responsive to their initial concerns and suggestions.



In addition to providing feedback during our first visit on the PDH tool kit items developed initially, staff at the demonstration sites identified new items that they believed would be good additions to the tool kit. New tools they suggested are described here:

Brief for commanders: Because the PDH guideline would be used at BASs and TMCs, the sites recommended a brief be prepared to introduce local commanders and corps and division surgeons to the PDH guideline and the implementation process. The brief should outline the rationale for the guideline, its key elements, its potential benefits for the troops, and the expected impact on staff workload.

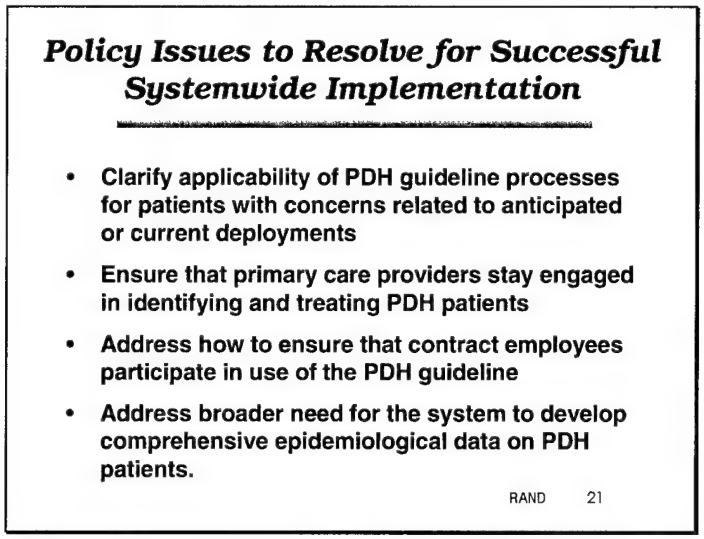
Media kit: To increase awareness of the PDH guideline among military personnel and their family members, staff recommended making a patient awareness media kit available to local facilities for use in conjunction with its local implementation activities. The kit should include such materials as sample ads to place in the local newspapers, posters for clinic waiting rooms, and public service announcements for local or internal TV channels. The kit would ensure consistent communication of messages about the PDH guideline across the system. The DHCC has contracted with a media firm to help with the design and preparation of these materials. A staff member from this firm was an observer during our second visits to gain firsthand information from the sites.

Reminder card for screening: To provide guidance for ancillary clinic staff on how to work with the screening question, the sites recommended development of a reminder card that would contain the desired phrasing for the initial screening question, the definition of deployment, and possible responses to patients' questions. The clinic staff could refer to this pocket or desktop card as

needed when interacting with patients. This reminder card was designed, printed, and made available to the sites by the time of our second visits and was well received by the ancillary clinic staff.

Ancillary staff training module: The ancillary staff themselves asked for a training module that would acquaint them with the key elements and the rationale of the PDH guideline and would instruct them in how to perform their roles in implementing it. The training should also provide them guidance and examples on how to answer various questions that patients are asking about the screening process and how it may affect them personally (or for family members how it may affect their military husband or wife).

Data extraction and analysis tools: Finally, the QM/UM staff asked to be provided with "ad hoc" programs or instructions on data collection and measurement to facilitate their ability to monitor the PDH metrics. Two types of support materials were identified: an "ad hoc" software program to retrieve information from the CHCS in the content and format desired and a written protocol for a peer-review process to review PDH cases, which would specify the frequency of reviews, number of cases to be reviewed, information to be retrieved from the patients' records, and appropriate analyses to perform. The peer review protocol was developed and made available to the sites by the time of our second visits. The CHCS "ad hoc" program was not yet completed as of the end of the demonstration in September 2001.



Several key policy issues arose during the demonstration that RAND believes need to be resolved by OSD/HA to avoid compromising progress in implementing effective care for PDH patients across the health system:

Definition of post-deployment: Although the PDH guideline is intended to follow up on ailments related to a completed deployment, some family members have been responding positively to the screening question for anticipated and current deployments. Local facilities need clear guidance on how to handle these cases. The health concerns of these patients would be treated by providers regardless of classification, so the issue becomes one of coding and follow-up. Does OSD/HA consider concerns related to anticipated and current deployments to be covered by the guideline, and if so, should they be coded as "post-deployment treated" or should other codes be used? Otherwise, the screening question and training of providers and ancillary clinic staff should clearly delineate the boundaries of the guideline—boundaries that may be difficult to maintain consistently in practice. This issue has higher-level implications for DoD and VA with respect to the purpose and scope of the practice guideline.

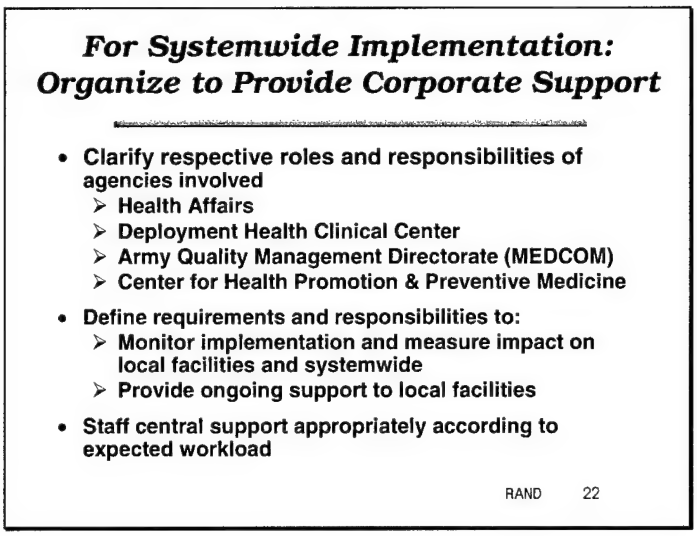
Engaging primary care providers in care for PDH patients: Because of the very low incidence of PDH patients during peacetime deployment activities, in particular those with MUPS, most primary care providers may not see many cases, and they may not manage care for a MUPS case for months at a time. Therefore, as seen in the demonstration, most providers will forget to be on alert for these patients, and it will be difficult for them to retain knowledge of the PDH guideline recommendations for managing patients. Both of these phenomena are a threat to successful use of the PDH practice guideline. It will

be essential for OSD/HA to develop a strategy to ensure that primary care providers can respond effectively when large deployments generate substantial numbers of patients with PDH concerns. We suggest use of an "emergency preparedness" model to prepare for repercussions of large deployments on subsequent needs for PDH care. For example, OSD/HA should be ready to activate a PDH guideline refresher training program that is targeted on installations most affected by deployments or, in the event of a major conflict involving a general mobilization, that is targeted across the system.

Use of guideline by contract personnel: When working with the PDH guideline (or any other clinical practice guideline), facilities have had continuing difficulty in making changes in the practices of civilian contract providers and clinic personnel. This issue is especially challenging where contract employees make up a significant share of the providers or staff in a clinic. Contract employees have no incentive to participate in education sessions on the PDH guideline because their time is not covered, and they tend to resist any change they perceive might increase the time they spend with patients (or otherwise would decrease their revenue). Staff at the demonstration sites advised that contract staff cooperation with the implementation of clinical practice guidelines cannot be ensured without mandating it by contractual agreement.

Development of epidemiological data on PDH patients: Misconceptions arose among the staff at the demonstration sites that the main purpose of the guideline was to collect data on PDH patients, and these views persisted despite attempts at clarification by the OSD/HA leadership team. This dilemma appeared to be a symptom of the fact that all parties involved recognized the importance of building a reliable database to study the epidemiology of PDH patients. However, the processes specified in this guideline for identifying and treating PDH patients were designed for enhancing clinical care—collecting valid and reliable data is a separate but related issue. The self-reported PDH concerns might be overreported (if the patient perceives a problem that is not real) or underreported (if the patient does not perceive a real problem).

Establishment of a PDH epidemiological database is a priority for OSD/HA, and we concur with that priority. OSD/HA plans to draw data from several sources on deployments, evaluations of deployed personnel, and MTF records on PDH patients. Careful decisions should be made about how the MTF data generated from patient self-reports of PDH problems should be used in the database, and data quality should be ensured through audits of completeness and clinical reviews to verify the health problems and correctness of diagnostic coding.



The implementation of the PDH guideline across the Military Health System will be a major undertaking requiring careful advance planning and coordination among several agencies from the different services and the Pentagon. Our experience with practice guideline implementation for primary care providers in the Army suggests that two organizational conditions must be met for successful implementation: lines of authority and responsibility among implementing agencies must be clear and the staffing must be commensurate with the magnitude of the task. These corporate institutional elements need to be in place before systemwide implementation of a guideline begins because the central program office will face immediate questions and requests from the local facilities, to which it must be ready to respond. Failure to provide early leadership initiative and guidance would lead to loss of momentum by the local facilities, which, once lost, will be extremely difficult to regain.

Many questions about the roles and responsibilities of the four main agencies involved in the PDH guideline implementation were raised and discussed by the visit teams as the site visits progressed. As a result, the agencies have clarified many aspects of their roles for implementation of the PDH guideline. OSD/HA has policy responsibility for guideline implementation and the resolution of related policy and administrative issues. It also monitors metrics to track PDH practices and outcomes using its operational arm—the TRICARE Management Activity—through the National Quality Management Program. MEDCOM, in its role as DoD executive agent for the VA/DoD guideline, is responsible for updates to the PDH guideline, integration with the companion and follow-on guidelines (for post-traumatic stress disorder and MUPS), systemwide educational efforts (e.g., broadcasts), and tool kit updates and development. MEDCOM conducts tool kit updates and development in coordination with

CHPPM. The DHCC serves as the clinical expert with referral support for MUPS patients, PDH-related clinical questions, and the refinement of the PDH clinical support tools (e.g., Web sites and risk communication training). These four entities will continue to refine their roles as the PDH guideline is implemented across the health system, and, ultimately, these roles should be codified in writing.

Two specific issues require clarification. First, a central person or office should be designated as the liaison to whom facilities can turn for questions, clarification, or guidance on the various aspects of working with the PDH guideline. Sites need to know that they will get timely and efficient responses to their inquiries. Therefore, the liaison needs to be thoroughly trained in the contents of the guideline, the recommended clinical steps for managing PDH patients, the details of the materials and tools developed to support implementation, and POCs for other relevant agencies (e.g., for appointment systems, use of diagnosis codes, DoD forms).

Second, the central monitoring of implementation progress and the PDH metrics is a specialized function that is key to assessing implementation progress and ensuring ongoing use of desired practices. This function tends to be overlooked and understaffed, which can compromise long-term success in institutionalizing the desired new practices. An early decision should be made regarding where this function is to be housed for monitoring of the PDH guideline, and it should be staffed as soon as possible. The short-term goal for this function should be to track facilities' progress in carrying out new practices to identify and report problems early in the process. For the long term, ongoing monitoring of the PDH metrics should be performed to assess impact on workload, changes in service delivery processes, and patient satisfaction.

Appendix

POST-DEPLOYMENT CLINICAL PRACTICE GUIDELINE

Questions for Three-Month Site Visit
Implementation Team

Introduce evaluation team.

Describe purpose of three-month evaluation: To learn about your experience with implementation of post-deployment guidelines and use of the tool kit items:

- Actions taken by the implementation team since your return from the kickoff conference
- Progress made implementing your action plans
- Successes and ongoing challenges and implementation issues
- Usefulness of tool kit items and potential improvements
- Lessons for systemwide implementation

1. Operations of the Implementation Team

1.1. Describe the activities of the implementation team since you returned from the kickoff conference:

- How many times have you met formally as a group?
- What were the main issues discussed and how were they resolved?
- If or when not meeting as a team, how did you communicate when implementation issues arose?

1.2. Were any changes made to the composition of the implementation team since you returned from the kickoff conference and, if so, why?

1.3. How much time did the various members of the team devote to implementation activities for the PDH guideline since returning from the kickoff conference?

1.4. Were the team leaders given dedicated time for this work? What about team members?

1.5. Has command been supportive of the work of the implementation team? If yes, how has command actually supported the team? If no, why not?

2. Progress in Implementing Action Plans

The questions below follow in sequence the steps described in the three implementation plans. Although there are some variations among plans, they all follow the same sequence of planned key events.

2.1. Have you briefed the command team on the PDH guideline? If so, when?

- What support did command provide?
- What issues did command raise?

2.2. *Guideline Introduction and Education*

2.2.1. To date, who has been introduced and educated on the PDH guideline?

- Department heads/executive steering committee?
- Providers?
- Nurses, technical staff, clerks, coders?
- Others?

2.2.2. How was the training conducted: all groups together or in separate groups?

2.2.3. Who did the training and what did it consist of?

- How many sessions were conducted?
- How long did each session last?
- What materials were used to introduce the guideline and key elements (e.g., briefings, algorithms, list of key elements)?

2.2.4. What was the range of reactions of the staff to the PDH guideline?

2.2.5. What percentage of the staff have yet to be trained and when will they be trained?

2.2.6. What factors have facilitated or impeded your educational activities?

2.3. *Screening of Patients/Process Reengineering*

2.3.1. What changes were made to the flow of patients in order to implement the PDH guideline?

- Role of desk clerk?
- Who does the screening?
- Use of the screening stamp?
- Is the Post-Deployment Medical Assessment form used? Who fills it out?
- How much attention has been given to procedures for the second appointment?
- Is a process in place for setting 30-minute follow-up appointments?
- For which patients are the SF-36 or Patient Health Questionnaire form completed?
- How are cases coded and by whom? Is this a manual or automated process? What changes were made to coding forms or screens (superbill form at Womack)?
- Are additional changes to the flow of patients planned?

2.3.2. What factors have facilitated or impeded implementation of the new procedures to identify and manage patients with post-deployment concerns?

2.3.3. How have the new procedures your describe affected staff workload?

2.3.4. When did universal screening begin? If not begun by the end of April, reasons for delay?

2.3.5. How many patients with post-deployment concerns have been identified to date? [*Get numbers and period of time to allow calculation of monthly estimate.*]

2.4. *Patient Education*

2.4.1. How do you plan to manage education and information for asymptomatic patients and those with medically unexplained physical symptoms?

- How much of the patient education is to be done by providers?
- How much by nurses or other clinical staff (e.g., health educator)?
- Are there plans for a dedicated nurse/case manager (who might also have responsibility for other types of patients)?

3. Feedback on the Practice Guideline and Metrics

3.1. How well do you know the key elements of the guideline? (show the card). In your opinion, do they succeed in summarizing the most important points for providers to know? What changes do you suggest to make the key elements more effective?

3.2. Are you familiar with the key metrics to monitor progress in PDH care? (show the card). What reactions do you have to these metrics? What other indicators do you wish or plan to monitor locally?

4. Feedback on Tool Kit Items

OSD/HA, the DHCC, Army MEDCOM, and CHPPM have developed a set of tools to help support your achieving best practices for patients with post-deployment concerns. In this part of the session, we would like to review with you several of these tools. We will start with a few general questions and then will ask for your feedback on some of the specific tools.

4.1. Are you familiar with the tool kit of items developed and provided to your implementation team? Which items are you aware of? Which have been used at your site?

4.2. In general, how useful have the tools been?

4.3. Review of specific tools:

Post-Deployment Health Assessment Form

Distribute copy of form to respondents.

- Is the form being used in your site at this time? If so, how is it used? How has the form been received by providers? Have there been any problems using it?
- Comments on Section 1? (filled out by health care personnel).
- Comments on Section 2? (filled out by patient).
- Comments on Section 3? (filled out by provider).
- Are the forms being placed in patient's medical record as intended?

Card with Diagnosis Codes

Distribute the reminder cards to respondents (the revised card).

- Are the instructions for coding PDH patients clear to you?
- What diagnosis codes would you need to code a patient with unexplained symptoms?

- What changes in the card would make it easier to understand?
- Do you face any barriers, either locally or at higher levels, that make it difficult for you to use diagnostic codes for PDH visits as instructed on the card?

Screening Stamp

Distribute the sheet with stamp to respondents.

- Is the screening stamp being used in your site?
- How useful is the stamp for covering the key screening questions for a visit, including whether the visit is for a post-deployment concern?
- How might the stamp be improved?
- Do you see the stamp as a temporary tool for your site, to be replaced by another format for screening questions? If so, what will replace it?

Patient Brochure on Medically Unexplained Physical Symptoms

Distribute the patient brochures to respondents.

- Have you used this educational brochure for PDH patients?
- Do you think the brochure provides helpful information for patients?
- What methods and materials do you use to educate patients with unexplained symptoms? Do you refer them to others for education?
- When and how would you be most likely to give patients this brochure?
- Have you received any feedback from patients about the brochure, good or bad?
- Do you have any comments or suggestions about the brochure format and cover?
- What about the clarity and reading level of the information given in the inserts?
- Which of the inserts do you think is most (or least) important to provide?

4.4. What additional tools would you like to have available to you?

Thank you for all your time and thoughtful discussion. Is there anything else you would like to add or additional comments you would like to make?

POST-DEPLOYMENT CLINICAL PRACTICE GUIDELINE

Questions for Six-Month Site Visit
Implementation Team

Describe purpose of six-month evaluation site visits: To learn about the extent to which you have institutionalized use of the post-deployment guideline and tool kit items:

- Extent of completion of actions in your action plans
- Actions taken by the implementation team since the June visit, including the extent of expansion to other clinics or BAS/TMC
- Successes and ongoing challenges and implementation issues
- Feedback on revised tool kit items
- Lessons for systemwide implementation

1. Progress in Implementing Action Plans

The questions below are designed to (1) document the extent to which the site completed the actions specified in their action plans and (2) get feedback on the implications of expanding implementation beyond one clinic to multiple primary care portals.

1.1. Extent of guideline implementation

1.1.1. What implementation actions did you want to complete by this time?

1.1.2. How do those goals compare to the actions in your original action plan?

1.1.3. Where did you reach the goals and where did you not?

1.1.4. What factors (positive or negative) affected your ability to achieve the desired actions?

1.2. Have you briefed the command team periodically on the PDH guideline? If so, when?

- What support did command provide?
- What issues did command raise?

1.3. Have you performed follow-up education on the PDH guideline? If so, to whom and in what format?

1.4. How have you changed your implementation activities or emphasis, if at all?

1.5. How have providers and clinic staff reacted to the PDH guideline as your implementation activities continued? Are these reactions different from their initial reactions?

1.6. Screening of patients/process reengineering in current location

1.6.1. Have you changed the way you use the screening question to identify patients with PDH concerns?

- Role of desk clerk?
- Who does the screening?
- Use of the screening stamp?

1.6.2. How are you using the Post-Deployment Medical Assessment form, if at all? Has your approach changed since the June site visit?

1.6.3. Have you implemented new procedures for performing the second PDH clinic visit?

- Is a process in place for setting 30-minute follow-up appointments?
- For which patients are the SF-36 or Patient Health Questionnaire completed?
- What factors have helped or impeded use of any new procedures?
- Are additional changes to the flow of patients planned?

1.6.4. How is coding of PDH cases performed?

- Who does the coding?
- What training or monitoring are you doing to be sure coding is accurate?
- Have you resolved any issues with revisions to coding forms or screens?

1.6.5. How have the new procedures you describe affected staff workload?

1.6.6. How many patients with post-deployment concerns have been identified to date? [*Get numbers and period of time to allow calculation of monthly estimate.*]

1.6.7. How are you performing education and information for asymptomatic patients and those with medically unexplained physical symptoms?

- How much of the patient education is being done by providers?
- How much by nurses or other clinical staff (e.g., health educator)?
- Are there plans for a dedicated nurse or case manager (who might also have responsibility for other types of patients)?

1.7. Expansion of guideline use to other portals

1.7.1. Have you begun to implement the PDH guideline in other locations? If so, which ones?

1.7.2. What approach was taken for introducing new practices—e.g., screening, PDH visits?

1.7.3. What training processes did you use to educate providers and staff in the new locations about the PDH guideline?

1.7.4. How did these providers and clinic staff respond to the guideline or to new practices involved in carrying it out?

1.7.5. What operational or coordination issues arose when using the guideline in more than one location? What implications do these issues have for systemwide implementation?

2. Activities of the Implementation Team

2.1. Describe the activities of the implementation team since our site visit in June:

- How many times have you met formally as a group?
- What were the main issues discussed and how were they resolved?
- If or when not meeting as a team, how did you communicate when implementation issues arose?

2.2. Have you made any changes to the composition of the implementation team for activities in your original location?

2.3. How much time are the leaders of your team devoting to implementation activities on a weekly or monthly basis? Has any dedicated time been given for this work?

2.4. How much time have other team members spent working on implementation?

2.5. Were the team leaders given dedicated time for this work? What about team members?

2.6. Has the implementation team changed with expansion to other locations?

- How has the team membership changed?
- Are there separate champions for each new location?
- Has the frequency or contents of team meetings changed?
- Has the team been a vehicle for coordination of activities across locations?
- How much additional time has the team or leaders devoted to the expansion work?

2.7. How has command supported the team in doing its work?

3. Feedback on the Practice Guideline and Metrics

3.1. Based on additional experience working with the PDH guideline, what questions or concerns do you have about the guideline?

3.2. What are the most important issues we should address in preparing to implement the PDH guideline across DoD health facilities?

4. Feedback on Tool Kit Items

4.1. In response to the sites' experiences and feedback at the June site visits, OSD/HA, the DHCC, Army MEDCOM, and CHPPM have revised the tools developed to support your achieving best practices for patients with post-deployment concerns. The revised tools have just been completed, and we would like to review them with you.

Post-Deployment Health Assessment Form

- How is the form being used at your site right now? Has the approach to the form changed since the June site visit?
- How useful is the assessment form for documenting care for PDH patients?
- Is the form successfully getting placed in the patient chart for provider use?
- What reactions do you have to the revised form?
- What reactions do you have to the DoD guidance on when to use the form?
- What additional guidance do you think should be provided on use of the form?

Card with Diagnosis Codes

- Are the instructions for coding PDH patients clear to you?

- Do the examples help clarify how to do the coding?
- What diagnosis codes would you use for a PDH patient with unexplained symptoms?
- What changes to the card would make it easier to understand?
- Do you face any barriers, either locally or at higher levels, that make it difficult to use diagnostic codes for PDH patient visits as instructed on the card?

Deployment Health Concerns Information Card

- How effective is this card in providing guidance on asking the screening question and responding to patients' questions?
- Do the examples of deployments help clarify what is meant by the term "deployment"?
- How helpful are the responses to the question of "Why ask this question?"

4.2. What additional tools would you like to have available to you?

4.3. Do you have any additional comments on the revised tools in the folder?

Thank you for all your time and thoughtful discussion. Is there anything else you would like to add or additional comments you would like to make?

BIBLIOGRAPHY

Cretin, S., D. O. Farley, K. J. Dolter, and W. Nicholas, "Evaluating an Integrated Approach to Clinical Quality Improvement: Clinical Guidelines, Quality Measurement, and Supportive System Design," *Medical Care*, Vol. 39, No. 8, 2001, pp. 70S–84S.

Department of Defense and Department of Veterans Affairs Veterans Health Administration (DoD and VA), *Clinical Practice Guideline for Post-Deployment Health Evaluation and Management*, Washington, D.C., 2000.

Institute of Medicine (IOM), Committee on the Evaluation of the Department of Defense Comprehensive Clinical Evaluation Program, Division of Health Promotion and Disease Prevention, *Adequacy of the Comprehensive Clinical Evaluation Program: A Focused Assessment*, Washington, D.C.: National Academy Press, 1997.

_____, Committee on the Evaluation of the Department of Veteran Affairs Uniform Case Assessment Protocol, *Adequacy of the VA Persian Gulf Registry and Uniform Case Assessment Protocol*, Washington, D.C.: National Academy Press, 1998.

Langley, G. J., K. M. Nolan, T. W. Nolan, C. L. Norman, and L. P. Provost, *The Improvement Guide: A Practical Approach to Improving Organizational Performance*, San Francisco: Jossey-Bass Publishers, 1996.

Nicholas, W., D. O. Farley, M. E. Vaiana, and S. Cretin, *Putting Practice Guidelines to Work in the Department of Defense Medical System: A Guide for Action*, Santa Monica, Calif.: RAND, MR-1267-A, 2001.

Swinehart, K., and R. F. Green, "Continuous Improvement and TQM in Health Care: An Emerging Operational Paradigm Becomes a Strategic Imperative," *International Journal of Health Care Quality Assurance*, Vol. 8, No. 1, 1995, pp. 23–27.